Lectures
ON
CLINICAL MEDICINE.

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PATHOLOGY OF CHOLERA.

GENTLEMEN,—In concluding my last lecture I invited you to begin the clinical studies of the year by considering that special disease which, happily, is not always affording us the opportunity of its fearful presence. Cholera is a disease altogether new to you who can have seen no former visitations. To all of us there is an open competition for the great prize which has still evaded every effort—the prize of discovering its pathology, and of establishing a successful method of treatment. You are all aware that the methods of treating it have been very little more than tentative, founded upon very vague data as to the real morbid condition; and you all know that a certain set of symptoms have been reproduced in almost every case with a wonderful uniformity, and that remedies of all sorts have been tried, and have failed to establish anything like a conclusive result as to the efficacy of any one.

The balance of advantages slightly inclining towards any particular method has been ascertained only by means of large statistics—means which we must consider scarcely worthy to be adopted as the only guide for a scientific profession. The chief result which this reference to statistics has produced has been to show a prevalence of success by means of calomel and opium; but it is scarcely to be wondered that this evidence has not been generally acted upon, considering that it stands merely as a fact, unsupported by knowledge of the disease and of the mode of action of the apparently successful remedy. One other testimony, however, has also stood out amongst statistic records—viz., the futility of an almost unlimited resort to stimulants in the stage of collapse. This treatment has, therefore, been as fully discouraged.

Whilst little, either, as to available treatment has been established, the only result forthcoming from innumerable guesses is to prove that whatever lowers the vital energy produces a state favourable to the development of the disease. It is a good thing to find new motives to co-operate against the prevalence of want, intemperance, and dirt in all its forms; but it will not do for us to rest in the suppression of any of these secondary influences, especially as there are cases in which not any one of them can have been instrumental in predisposing to the attack. We have had men of scrupulous habits and high characters—ladies who are not within reach of bad drainage or defective ventilation, and children, all attacked; and though these are the exceptions, they compel us to look beyond the causes which have prevailed where the disease is rifest.

The widest of all the predisposing causes is undoubtedly that arising from situation and the nature of the subsoil. Low levels and the neighbourhood of rivers have been shown to have a certain influence, as well as atmospheric changes, such as the presence of unusual heat and moisture, the absence of ozone, &c.

The French have instituted some experiments hoping to discover the action of morbid material in setting up the disease. As their labours in this direction have a certain amount of interest, I shall briefly notice them. They have proceeded on the idea that the seeds of the disease are contained in the excreta, and propagated by being received through the mouth into the system. They have saturated bibulous paper with these excreta, and have given them afterwards, mixed with the food, to animals; and they assert that uniform results have been obtained. The subjects of these experiments have been attacked by bowel complaints, by spasms and convulsions, and by suppression of urine and death. It was observed that when the dejections were thus given in food, if they were used within three days after being passed, no effects ensued; that when the excreta had been passed from three to six days, the animals suffered all the choleraic symptoms; and that after the excreta had been passed for a longer period, there were no effects at all.

These are certainly curious results; but their value depends immensely upon the good faith in which they have been tried, and the number of the experiments made. At present they do not seem to throw any new light upon the mystery; whilst the attempt to use them practically in the way of closing wells—on the additional supposition that there may be oozing of infected matter into them,—is equally foolish and pernicious: cutting off a purifying element in districts where its absence is the most aggravating of circumstances; making a great evil in order to avoid a highly remote chance of contamination. The one useful practice inculcated by the theory is that of great care immediately to remove and deodorise all vessels which contain the excreta—a practice which, however, decency and common sense would of themselves suggest. Since, however, neither the speculations on atmospheric influences nor the French inquiry into the influence of contaminated fluids have as yet produced any result, we cannot believe it to be other than our duty to follow out any glimpse of possible light which any new trains of reasoning may seem to promise.

As you are all as yet unacquainted with the appearances of the disease, it will be needful, before I attempt any new suggestions, to put you in possession of its symptoms and its usual course, though so well known to the medical world.

The commencement of cholera is almost always ushered in or preceded by an attack of diarrhœa, which differs from common diarrhœa by being painless. It soon ceases to be feculent, and is simply a large quantity of white or gruelly-looking fluid, sometimes pinky or light-red coloured—a colour derived from the colouring matter of the blood. This last symptom, indicating the breaking up of the blood, is a most ominous warning of the fatal character of the attack. Thus we may describe choleraic diarrhœa, as distinguished from common bowel attack, as large watery discharges, colourless or nearly so, with flocculent matter suspended in them, of the appearance of portions of rice, or like thin gruel, coloured occasionally reddish, and passed in large quantity without pain from the bowels. Vomiting also in many cases takes place in conjunction with the purging, and is equally urgent; the fluid vomited is poured out from the mouth like water from the spout of a pump. This is a state of things in which collapse may supervene at any moment, accompanied with hoarse voice, cramps in the limbs, shrinking of the surface, wet and shrivelled skin, and suppression of urine, with great external coldness; the tongue is very cold; the breath even is cold; the pulse not perceptible at the wrist; the eyes become sunken, and rather stare; and the surface assumes a dusky-red colour, inclined to purple or even blue wherever the vessels are distributed to delicate membranes. Whilst the surface is cold, the patient frequently complains of great internal heat. This is the true collapse or algide or cold stage, and it seems almost wonderful, with such an apparent disorganisation of the system, that it should ever be recovered from; yet even from such a state recoveries are not infrequent, either to a complete convalescence, or towards the more usual course of passing into consecutive fever. If reaction takes place, whether towards recovery or towards consecutive fever, the subsidence of all the appearances of the stage of collapse is remarkably rapid. The first good symptom to be hailed with thankfulness is renewed secretion of urine; other healthy secretions follow; and when no fever ensues, a very few days reinstate the healthy condition of the patient. This favourable result is comparatively rare, as the greater pass at once from collapse into consecutive fever. This fever is, as might be expected, of a low type, formerly called of a typhoid character; but that term has now been differently appropriated according to better understood classification of fever cases. We therefore simply call it low fever. The constitution is sometimes able to surmount the fever stage, aided by measures to reinduce healthy secretions and to support the strength.

When these aids towards recovery are unavailing, the patient passes into coma in a gradual manner, with the usual injected state of the eyes, a good deal similar to that observed in albuminuria. This is an instructive symptom, pointing to a cause common to the two diseases. Death, however, in cholera ensues without being accompanied with the convulsions or epileptic seizures which we meet with in albuminuria—convulsions which are believed to arise from the retention of the elements of urea in the blood.

It is interesting to inquire why there should be coma and the injected eyes in cholera without convulsions, as in albuminuria. We must refer it to the previous exhausted condition during the period of collapse, as well as to the possible passing

off of some of the elementary constituents of urea during the enormous drain which has taken place from the stomach and bowels.

In choleraic diarrhœa a current is set up in the bowels: the fluids of the body pass out of the bowels, and the blood thus becomes drained of its watery particles as well as of its albumen. What can be the cause of this process? May it not, or rather must it not, be referred either to some disturbance in the state of equilibrium of the fluids, or to some different condition of the mucous membrane itself as regards the two sides of that membrane? The phenomena of the transmission of fluids of different densities through membranes have been so long observed that they are no doubt familiar to you. I shall refer to them again in endeavouring to explain the nature and effects of choleraic disease.

I shall now speak of the pathological changes. These you have lately had opportunities of examining for yourselves. We have had four post-mortem inspections. Three of the cases having died in the collapse stage without passing into consecutive fever, we have had opportunity of observing the changes uncomplicated with the effects of fever, and of comparing them with the symptoms during life. You would perceive congestion of the mucous as well as of the serous tissues of the intestines. In one of the cases which had been taken in during my week there was scarcely any appearance of this congestion in the stomach, as might have been expected from there having been but little vomiting. In cases which were inspected during former visitations of cholera, of which I can now show you representations, you will see that the same evidence of congestion or hyperæmia is found as well in the stomach as in the intestines. You would notice in our recent inspections that the appearance is that of ecchymosis—the serous tissue of the intestine being deeply stained of a purple hue, with small portions of lymph here and there; the dark colour indicating congestion arising from delay of the thicker and coloured parts of the blood from which the serum has been drained. The coats of the intestines seemed thinned and shrivelled, in consequence of the drain of the watery particles; the glands and patches of Peyer were unusually defined; the lining or mucous membrane of the ileum you would notice to be slimy and soft, saturated with the pinky gruelly fluid which was passing through it, and which, had the patient lived, would have formed part of the dejections. There was great rigidity of the muscles, due probably to the spasmodic action during life. The muscles were very red. A remarkable appearance was presented in the bladder. This organ was quite contracted, and presented the appearance of a dried fig. This I look upon as a distinctive characteristic, and as far as my observation goes it is invariable; it denotes a state of complete suppression of the secretion of urine.

It has been asserted that the kidneys have been found in a state of fatty degeneration, but in these cases you would observe that this did not occur, nor have I ever seen it: it is not, in fact, likely to be a result of a disease which destroys life so rapidly. It may take place in cases which proceed to fever. There were numerous ecchymosed spots beneath the pericardium proper, at the angle of the union of the two sides of the heart. These ecchymosed spots seem to me to be a result of the violent vomiting and cramps. We see the same thing under the eyes during life in persons after violent sea-sickness. They are spots of blood ecchymosed under the skin.

Scarcely less important than the appearances after death is the evidence afforded by the state of the blood drawn during the attack. The deteriorated nature of the blood is of all things most instructive. In the present day the blood is so seldom to be obtained for examination except after death, that I must refer to a time, more favourable to such examination, when, at the first arrival of the disease in England, all lines of practice had to be essayed; whilst practitioners of that time were not devoid of reasons for such experimental treatment, suggested partly by the desire to relieve the clogged and congested state of the vessels which you had the opportunity of observing in the inspections of last week. The deteriorated state of the blood so abstracted in 1832 was singularly manifest. The coagulum was observed to be floating high up in the serum; the surface dry, or with a few cup-like indentations containing serum. If the clot were taken out of the serum and inverted, the under part would be found quite soft and readily broken down; it might, in fact, be easily brushed off by the hand, so slightly adherent were the particles it was composed of. There is a great deal to be inferred from this, and the study is by no means complete. I shall refer to this topic again when I speak of a line of practice having for its object a restoration of the blood to its naturally fluid condition.

ON IMMUNITY OF THE SKIN AFTER LONG-CONTINUED IRRITATION.

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PROF. F. C. FAYE has lately published, in the twentieth volume of the *Norwegian Magazine of Medical Science*, some observations on the supposed property of the human skin to become less and less susceptible to the action of external irritants, until at length these produce no visible effects. This condition, when attained, is called "immunity." Dr. Faye invites the attention of observers in various countries to this subject, in order to determine whether this immunity can really be obtained or not. This question, as he says, has its physiological and its practical bearings, and each of these has its own peculiar interest. Experience upon the point with regard to the past is not, however, altogether wanting. Dr. Faye had observed some time ago that blisters applied at short intervals to a limited surface by degrees became ineffectual; or, in other words, that the skin became more and more callous to the action of cantharidine, and that at last a condition of local immunity was produced. At a time when "flying blisters" were much more used than at present, physicians had better opportunities of observing the conditions under which this immunity was produced than they now have. Dr. Faye mentions that Professor Sörenson had remarked the difficulty of getting blisters to act when repeatedly applied; and he mentions that several of his colleagues could confirm the fact. He mentions a case of coxalgia in which the patient complained, after being repeatedly blistered, that the blisters ceased to produce their former effect.

The only series of experiments made with the express purpose of determining the question were instituted some years ago in Paris. The report on these experiments, which appeared in due course, declared that after a time the skin really lost its power of reaction, and became less and less susceptible to external irritation.

Dr. Faye mentions that he had used for the purpose of counter-irritation an ointment composed of one scruple of corrosive sublimate to two drachms of lard. In the course of ten or twelve hours after this is applied a thin crust is formed, and after this is removed a suppurating surface is left. The degree of inflammation produced by this ointment varied much in different cases. Its repeated application had sometimes to be discontinued; but upon its reapplication, it was observed, as a constant phenomenon, that the irritation and secretion of the skin became less and less, until at last a state was attained in which scarcely any effect was produced.

In some individuals, from the commencement, the effects of the application of the ointment were less, and more circumscribed; and in them, after its repeated application, the immunity was sooner attained.

This plan of treatment, for some diseases, Dr. Faye has followed for several years, and, making allowances for different degrees of susceptibility in different cases, with uniform results.

In healthy persons the susceptibility and power of reaction vary much. In some an external irritant can scarcely be borne for a few minutes without producing a painful blush on the surface; while others can bear the same application without much pain or irritation for a considerable period. Dr. Faye has observed several instances of such peculiarity, which, of course, has a marked effect upon the time at which immunity would be produced.

When by degrees a torpid state of skin is obtained, so that the ointment above mentioned produces very little effect, the irritation of the skin can be continued by one or other of the following plans: either the ointment may be allowed to remain longer applied, or its strength may be increased. But it is to be noted that in the latter case the ointment, instead of producing simple irritation of the skin, is likely to induce mortification of its texture. The consequence of this is that the sores which follow become deep, and leave regular scars. This is not the same after the application of the ointment of the ordinary strength, which leaves only superficial sores.

The action of such irritating matter would appear in some respects to be peculiar in infants. From long experience Dr. Faye has found in the treatment of purulent ophthalmia in

newly-born children that the milder irritants produce less visible results, and are more circumscribed in their operation than in older children.

Dr. Faye says that he cannot express a distinct opinion on the point as to whether the continued application of irritating matter to a limited surface would produce immunity of the skin generally, nor how long the local immunity would last. All his experience had reference to the treatment of cases; and that treatment was discontinued when the cases were convalescent. From the facts which had come under his observation he is able to affirm that, after the application of the ointment as described, the skin on a large surface of the body—as, for instance, the nape of the neck and the back—becomes callous to its action, or, at the most, shows signs of a superficial soreness, which very soon dries up. And he also mentions that, after such application, the same irritants applied to other parts of the skin do not act so powerfully as those previously used.

From these facts, occurring under his own observation, Dr. Faye draws the conclusion that the repeated application of the ointment of corrosive sublimate, or of croton oil, or of other simple irritating agents to large surfaces of the skin, will lead to similar results as those obtained in Paris by the repeated application of blisters. This immunity, however, does not extend through the whole texture of the skin; for if the smallest quantity of the same irritating substance which no longer produces any irritation on the surface be injected into the texture of the skin, a small abscess will without fail follow. Dr. Faye mentions that Dr. Danielssen had found similar results to follow the repeated application of antimonial ointment on different parts of the bodies of patients affected with leprosy in the hospital at Bergen.

Dr. Faye wishes to draw a marked distinction between substances which produce irritation of the skin only and those which act chemically upon the tissues. The effects of the first class gradually cease; those of the latter continue as long as the skin remains alive. But he particularly dwells upon the fact that immunity of the surface of the skin does not necessarily imply immunity of other parts or of the general system. A very interesting illustration of this fact occurred during the last year. There was a patient of Mr. James Lane's in the Lock Hospital upon whom Professor Boeck supposed he had produced immunity by repeated inoculation. Mr. James Lane was good enough to allow me to test for myself whether immunity had really been produced. I inoculated some matter below the cuticle, a little deeper than the inoculations which had previously been made, but not deep enough to produce bleeding. The result was that in due course a small, well-defined, circular chancre, with sharp edges and a suppurating surface, was produced.* The surface-immunity, then, in this case did not imply an immunity for other parts. It was the surface of the skin only, and not the general system, which had become proof against one particular form of irritation.

To the list of observers above mentioned may be added the name of Dr. Rennie, whose experiments and observations Dr. Faye had not seen when he wrote his essay. These observations are referred to at some length in THE LANCET, on the 7th of April last, p. 362, and they entirely confirm Dr. Faye's experience; the only difference being that Dr. Rennie's cases occurred almost exclusively in adults, Dr. Faye's chiefly in children.

If, then, the observations already made, supported as they are by different physicians in the most remote parts of the world, should be confirmed by future experience, we have in the phenomena of so-called syphilisation only another manifestation of a common law. The surface of the skin becomes proof to a greater or less extent against the irritation of specific puriform matter, as it would against the repeated action of blisters, corrosive sublimate ointment, or croton oil. But in none of these cases does the immunity to a particular irritant imply that that immunity extends to other textures besides the immediate surface of the skin; nor that irritants of a different nature would not produce their ordinary effects upon the skin itself; nor, again, that the same action might not be again produced upon the skin so soon as the immunity should have passed off. As far as our present knowledge goes, it would, therefore, appear quite possible for a patient to become proof against the further inoculation of specific purulent matter on the surface of the skin and yet to become infected with another kind of syphilitic matter in the ordinary way, either through the skin or through some other part.

It would, of course, militate against the idea of any fresh matter in such a case being taken through the skin, if it could be shown that all syphilitic matter was essentially of the same nature; but even then other ways would still be open through which infection might occur.

That all syphilitic matter is essentially of the same nature was one of the facts that Professor Boeck attempted to demonstrate during his visit to England. He believes that if some secretion be taken from an indurated sore and inoculated, and a soft suppurating sore results, it is conclusive evidence that the poison in the two cases is the same. The evidence hitherto adduced in England on this point is most unsatisfactory, and the cases recorded are most inconclusive. It is now upwards of sixteen months since Professor Boeck paid his visit, and during that time, so far as we may learn from any published records, in two cases only has the matter been taken from an indurated sore and inoculated so as to produce a lineal series of chancres. These two cases (a sufficiently meagre list for a period of sixteen months) have already been sufficiently discussed in the pages of THE LANCET. But some observations may not be out of place with regard to the mode in which recent experiments on inoculation have been conducted.

The subject of a clean lancet need not again be referred to. There is one point, however, which appears not to have attracted the attention of those who have conducted the experiments—namely, that the inoculations, after they were performed, were left uncovered. It has every now and then happened to me to see spontaneous auto-inoculation occur in patients with suppurating syphilitic sores. This has occurred without any scratch or abrasion of the skin having been previously noticed; and it is certainly not less likely to occur where the skin has been abraded with the point of a lancet, and where the irritation thus produced may lead the patient unintentionally to scratch the irritated parts. It has also several times occurred to me to see a patient who had been many days in hospital without leaving the house, and who had no syphilitic symptom on admission, become affected with a soft suppurating sore. It is of course difficult to prove in what way such affections are communicated; but when we reflect that in Lock Hospitals patients may often necessarily use the same basins and the same towels, it is not surprising that such communication should occasionally take place. If this, then, may take place on skin apparently sound, it is evident that it may also occur on skin from which the cuticle has been removed by the lancet. This, therefore, among other sources of error, must be guarded against before a few cases can be held to illustrate a general law.

Fournier, in his experiments, found that indurated sores furnished an auto-inoculable secretion in the ratio of 2 per 100. Rollet's experiments gave 6 per 100. The proportion of cases in England, as far as any published records are concerned, do not appear to furnish any very different results. It is said, indeed, that by continually irritating an indurated sore, a secretion is at last produced which, as a rule, will produce a lineal series of inoculations. The only proofs of this assertion hitherto published in England are, as far as I know, the two cases above mentioned, and in one of these the sore suppurated from the commencement, and no irritating application was used. From these two cases three series of inoculations were performed. In one only of these had the process of long-continued irritation been applied to the indurated sore, and in that instance the patient was at the same time inoculated repeatedly with the matter from an ordinary suppurating sore. The first abortive attempts at inoculation from the indurated sore and the successful inoculations from the suppurating sore were alike left uncovered, as in the other recent experiments on inoculation.

Savile-row, January, 1867.

* The secretion from the pustule which preceded this sore was inoculated by Mr. James Lane, in the usual very superficial way of performing the operation. Two imperfect pustules were produced, and from these no further inoculations with the mode adopted could be made. Had the subsequent inoculations, however, been made to the same depth as the original one, a lineal series might, in all probability, have resulted.

ON

CERTAIN POINTS RELATING TO CHOLERA.

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IT may appear strange at this late period of the year to invite a discussion respecting cholera. The epidemic, it may be said, has almost subsided, and years may elapse before another opportunity occurs of investigating its natural history. But I

confess that I entertain a different opinion. The course of former epidemics of cholera, viewed in connexion with the salient features of the present visitation, is opposed to such a supposition. On all former occasions the full force of the malady has not been felt until the second year, and the experience of our neighbours across the channel has shown that in this respect the disease is observing the course it has always taken. Last year it committed sad havoc in Paris, and this year again its ravages were repeated. In London it has now visited us for the first time, and there is no reasonable ground for supposing that its visit will not be repeated next year. Indeed, many features of the outbreak we have just witnessed appear to show that we may expect a more general and more serious epidemic next year. This year the disease has nowhere prevailed in an epidemic form, except over a limited area at the East end of London, but it has gradually spread over the whole metropolis, and its progress has not been entirely arrested, even by the advent of cold weather. It has shown itself generally throughout the United Kingdom, and though its attacks have been few, and in most cases isolated, both in London and elsewhere, they have been virulent in their nature and rapid in their course, as if the seeds of a malignant form of disease were present, and only needed some peculiar condition of the atmosphere to call them into full activity, and ensure a serious outbreak of the epidemic. In short, if we may judge of the future from the past, there is too much reason to anticipate that next year we shall have ample opportunities of investigating the disease, and of testing any theory as to its origin, nature, and mode of spreading.

It is not my intention on the present occasion to enter into a discussion of the various theories which have been broached respecting cholera, but I will simply state my opinion that the existence of a distinct *materies morbi*—a cholera germ—probably of fungoid origin, which can be conveyed from one place to another, and possesses the power of reproduction in each locality under certain atmospheric or other conditions, is alone capable of explaining many of the facts which have been observed in regard to the disease. Amongst these may be mentioned the infrequency of its invasion; its occasional sudden outbreaks—outbreaks at once so sudden, so widespread, and so severe as to be inexplicable except on the supposition of some pervading morbid influence; the vast extent in some instances, and in others the limited area of its attacks; its predilection for low, dirty, ill-drained, unhealthy localities; the immunity of towns above a certain level; the extraordinary differences which have been noted in its period of incubation; the remarkable uniformity of its duration in an epidemic form in any locality; its spread generally in the direction of the wind, but sometimes in the very teeth of the wind; its apparent contagiousness or communicability in one case, and its non-contagiousness in another. Admitting, for the sake of argument, that cholera is due to the agency of some fungus, there is no one circumstance in the history of the disorder which is not susceptible of explanation. Nor is the theory far-fetched or improbable. The recent and very interesting researches of Dr. Salisbury have proved almost to demonstration that ague is produced by the spores of one of the species of palmellæ; and the experiments of Dr. Flint and others are scarcely less conclusive as to the fact of measles being caused by the presence of a peculiar fungus developed under certain circumstances on straw. It seems probable, therefore, though it yet remains to be proved, that cholera and all so-called zymotic and epidemic disease are referable to the noxious agency of some minute fungoid growth—an influence which would explain the whole history of the disorder.

This theory of cholera not only serves to unravel much of the mystery in which the disease has been enshrouded, but it forms an intelligible basis for preventive and curative measures. Knowing as we do how slight an alteration in the degree of light, heat, moisture, and other circumstances will promote or prevent the growth of fungi, how certainly the decomposition of animal and vegetable matters favours their development, how readily their spores may be conveyed from one place to another, and how unlikely they are to take root and develop unless they meet with a congenial nidus—it is quite intelligible that the disease should prove contagious in one instance and in no degree contagious in another; and it is also obvious that by taking measures to render the atmosphere pure, and to keep it in a condition unfavourable to fungoid growths, we shall be taking the most effectual steps to keep off the disease or to check its progress.

This brings us to the question of quarantine on the one hand, and of hygienic precautions on the other.

It must be admitted, I think, that cholera is not ordinarily contagious. Instances without number have been placed on record in which cholera patients have been massed together in buildings imperfectly ventilated, and where adequate cleanliness was simply impossible, and yet doctors, nurses, washerwomen, and attendants have wholly escaped infection. Instances are within the knowledge of every practitioner in which the disease, though virulent in certain houses, or sometimes in a particular portion of a house, has not evinced any tendency to spread, although free communication has been kept up between those houses and persons resident in the immediate neighbourhood. The same has been witnessed on a larger scale. One town, or one portion of a town, has been decimated by cholera; whilst another part of the town, or another town a few miles off, in daily and hourly communication with the infected localities, has remained perfectly free from attack. On the other hand, it would appear that the disease is communicable under certain unknown conditions. In many instances its invasion has been traced to the arrival of a ship from an infected port, or to the visit of an individual from an infected district; and many curious cases are recorded which seem to prove that the malady may be imported into a house, and may then be communicated not only to the inmates, but to the washerwomen and others connected with the family resident out of the house. In short, the history of cholera leaves no room for doubt that the disease is not contagious under ordinary conditions, but may become so under exceptional circumstances.

This remarkable difference in the contagiousness of cholera is not inconsistent with the result of observation respecting other diseases of the zymotic or epidemic class. On the contrary, it appears to be the rule rather than the exception, and it is quite in accordance with what might be expected if the disease acknowledges a fungoid origin. For whilst at one time, or in one locality, the condition of the atmosphere may not be favourable for the transmission of the fungoid spores, nor the bodies of those in contact with the patient fitted for their reception and development, at another these conditions may be reversed, and the spores may be suspended in vast numbers in the air and water, and may find the bodies of those who are about the patient fitted by electrical or other agencies to become suitable seats for their growth. This is just what was observed by Dr. Salisbury during his investigation into the action of certain of the palmellæ in the production of intermittent fever, and it is quite consistent with what we know in regard to the growth and spread of fungi generally.

Admitting, then, for the sake of argument, that the cholera germ may be, and sometimes is, imported, and that the disease is apt to prove contagious, what view should be taken respecting quarantine? My own, I confess, coincides with the practice hitherto pursued in this country. If it could be shown that the disease could not arise without the importation of its germ through human agency; that the germ loses its vitality in fourteen or twenty-one days, the limit of the time to which quarantine usually extends; and that the disease, when it does occur, *commonly* proves contagious,—then I maintain that we should be bound, at all hazards and at whatever inconvenience, to enforce the strictest quarantine. But facts are decidedly opposed to these suppositions. The records of cholera teem with examples of its invasion without any previous communication through human agency with an infected district; and ships at sea have been attacked with cholera though the disease did not exist at the port from which they sailed, and though they have not touched land for many weeks,—circumstances which seem to show that the seeds of the disorder may be conveyed by the air as readily as by human intercourse. Further, it appears doubtful whether the cholera germ loses its vitality within twenty-one days, or within any specified limited period; for quarantine, even where most strictly enforced, has proved ineffectual to prevent the importation of the disease. On the other hand, in this country, where quarantine regulations are not enforced in respect to ships arriving from ports infected with cholera, the disease has been imported and *has not spread*. The conclusions therefore seem inevitable, that the seeds of cholera may reach a country through the medium of the atmosphere; that when they are so introduced, quarantine, however strict, cannot prevent the invasion and spread of the disease; and that when they are not so introduced, but are imported directly through human agency, quarantine is seldom needed to prevent an outbreak of the disease, inasmuch as the malady will not spread in an uncongenial atmosphere, and therefore in most cases, with certain precautions, may be strictly limited in its effects.

The influence of sanitary arrangements in warding off the advent and spread of cholera is a subject which, equally with quarantine, demands careful consideration, lest, on the one

hand, the importance of sanitary measures should not be sufficiently recognised, and, on the other, it should be regarded as greater than it really is. No one can doubt that defective drainage, the emanations from sewers, the gaseous exhalations from decomposing filth of all kinds, impure water, over-crowding, imperfect ventilation, and other agencies of this kind, promote in some way the spread of the disorder; and that intemperate habits, deficiency of food, the depressing passions, and other circumstances which lower the general health, exert a similar influence. They do so probably in part by depressing the nervous power and lessening the resistance of those exposed to their influence, and in part by giving rise to a congenial nidus for the development of the cholera germ. Be this as it may, their action in encouraging an invasion of the disease, and in promoting its spread, cannot be doubted; and it is impossible, therefore, to praise too highly the precautions which have been taken to carry out proper sanitary arrangements, and to meet the disease at its very outset. But in many instances so much importance has been attached to these measures that their true bearing has been mistaken, and defective sanitary arrangements have been looked upon by many persons as the real cause of cholera. Especially has this been the case in regard to the water-supply, which has been held up, not only in the reports of the Registrar-General, but even in some of the medical journals, as the essential cause of the epidemic. So strongly has this notion taken hold of many members of our profession, that cases of cholera have been published as very remarkable and noteworthy because, forsooth, they have occurred in persons who have not tasted water. Doubtless foul water is a frequent source of disease, and observation has proved that it exerts a powerful influence on the spread of cholera. I am satisfied, however, that it does so not simply, as many persons suppose, by introducing into the stomach the excreta of cholera patients—for it has yet to be shown that the rice-water evacuations will produce cholera when swallowed,—but by proving a means of conveying into the system the *materies morbi* (sometimes probably derived from the excreta of cholera patients, but more commonly from the atmosphere), and at the same time by lowering the tone of the system, deranging the stomach and bowels, and so preparing the body for the reception and development of the cholera germ. But whether this view be adopted or not, it is vain to argue that water, however foul, is the essential cause of cholera. It is drunk in all its impurity when the epidemic is not present, and does not produce cholera; it is swallowed, tainted with choleraic excreta, when the epidemic is amongst us, and the disease ceases nevertheless after the lapse of three or four months—the usual limit of its duration *now*, as it was before the water was suspected, and at a time, therefore, when it was drunk freely up to the last. Doubtless water is *one* means of conveying the *materies morbi* into the system, but it is nothing more; and though the outcry which has been raised respecting our water-supply must benefit the community by tending to the cleansing of our rivers and to our obtaining purer water for domestic purposes, it will do little towards the discovery of the true source and nature of the cholera poison. Nay, more; the facts which have been discovered respecting the pernicious influence of foul water may even retard our progress if they are permitted to serve as the ground for stifling inquiry into the nature and source of the cholera poison. So, too, house-to-house visitation, the isolation of the sick, and other so-called preventive measures, however good and valuable in other ways, and no one can for a moment doubt their value, have little, if any, direct influence in checking the progress or duration of the disease. They may, and they probably do, diminish the mortality and mitigate the distress attendant on an epidemic, and they lead to the cleansing of many places, and the removal of many nuisances, which would otherwise remain as plague spots in the neighbourhood. But the decline of the disease, which is so often placed to the credit of the "stamping out" system, as pursued by the house-to-house visitors, is attributable to the natural declension of the disorder and not to human agency. The natural history of cholera shows that its duration in an epidemic form in any locality is limited to three or four months, and that the outbreaks which occur in the present day are not of shorter duration than they were when the disease first visited the country, and before the present "stamping out" system was commenced. Further, it is doubtful whether the intensity of the epidemic has been diminished by the measures adopted, though there is reason to believe that its mortality has been lessened by the precautions taken to treat the disease at its very outset.

In conclusion, I would beg that I may not be understood as deprecating sanitary measures, nor as regarding the labours of house-to-house visitors as of little value, for no one recognises more fully than I do their great importance; but simply as wishing to direct attention to the true effect of such measures, and as urging the necessity of a strict investigation into the essential cause of cholera, which must be sought elsewhere than in water tainted with choleraic excreta and in the neglect of hygienic precautions.

Manchester-square, Dec. 1866.

ON

FATTY DEGENERATION OF THE DIAPHRAGM.

BY GEO. W. CALLENDER, F.R.C.S.,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

I AM not aware that any notice has yet been taken of this disease, or that it has been described in any systematic work on Medicine or on Pathological Anatomy. A few cases have been referred to* in which the diaphragm has become wasted in connexion with a decay of other muscles of the body, but these are widely different from those which I propose to relate, in which the muscle, for the most part in connexion with the heart, has been the seat of fatty degeneration, and, in some instances, by failure of its action has been the immediate cause of the patient's death.

These cases came under my observation some years ago—1855–58,—whilst I held the appointment of Demonstrator of Morbid Anatomy at St. Bartholomew's Hospital, and consequently whilst it was my duty to make the medical post-mortem examinations. I publish them now because I am not infrequently hearing of cases of death from supposed fatty heart, but in which cases the earliest symptoms have been conspicuous for the remarkable disturbance and embarrassment of the breathing as distinguished from signs of failure of the cardiac action.

CASE 1.—My attention was first drawn to the occurrence of fatty degeneration of the diaphragm by the following circumstances:—J. M——, a female, aged fifty-nine years, married, was admitted into St. Bartholomew's Hospital on the 30th of December, 1855, under the care of Dr. Hue. There was nothing in her condition to indicate the speedy termination of her life, for she complained only, in addition to a slight bronchial inflammation, of being faint and ill, without being able to refer to any special symptoms. She was exceedingly fat, her breathing was shallow, and her respirations rapid. The bronchial affection was quickly recovered from, and she was on the eve of leaving the hospital, when, on the eleventh day after her admission, she was found by the night-nurse "struggling for breath," and died almost immediately.

I examined her body eighteen hours after death. Although an abundance of adipose tissue existed wherever fat is usually present, the voluntary muscles retained a natural appearance. The heart and liver were far advanced in fatty degeneration, as also was the diaphragm, to an examination of which I was guided partly by the obscure circumstances attending her death and the story of the embarrassed breathing, and partly by the pale and mottled appearance of the muscle as seen through the covering of peritoneum. The other organs and the vessels of the body were natural.

CASE 2.—Some time later the following case came under my notice:—S. P. M——, a female, aged fifty years, single, was admitted into St. Bartholomew's Hospital, on January 1st, 1857, under the care of Dr. Hue, suffering from rheumatism of three weeks' duration, the present being her first attack. Inflammation of the pericardium, as well as of the endocardium, required especial treatment. She continued without any material change in the symptoms until the fourth day, when, at half-past two in the morning, she was seized with orthopnœa, with sudden and great depression as though from some severe shock, became livid, cold, and bedewed with a clammy perspiration. Within an hour she was almost pulse-

* By Cruveilhier, Trousseau, and others. In cases of progressive muscular atrophy the diaphragm is one of the last muscles to be attacked. In Cruveilhier's well-known case "all respiration was at the base of the chest, and was effected by the diaphragm and the abdominal walls."—Archives Générales de Médecine, vol. i., 1803, p. 562.

less, her breathing entirely thoracic, and so noisy that nothing could be determined with the stethoscope. Her abdomen was distended with flatus, and painful on pressure; its walls were rigid and motionless. Sinking rapidly, she died the same morning at nine o'clock. Mr. Wood, to whose kindness I am indebted for this history, adds, "I could not help feeling that her mode of death resembled that from peritonitis from ruptured intestine;" and he suggested that this might be a case of spoiled and fatty diaphragm.

On making the post-mortem examination, twenty-four hours after death, the body was found tolerably well-nourished, but the integument was of a dusky purple, as with people dead from engorgement of the right heart and lungs. On opening the thorax the heart was seen considerably enlarged. The pericardium was adherent, as also were the pleuræ opposite the diaphragm and the lower parts of the chest. The cavities of the heart were dilated, and the left ventricle was also hypertrophied (thick-walled). The cusps of the mitral and of the aortic valves were thickened and fringed with deposits. The lungs and the right cavities of the heart were filled with dark fluid blood. The folds of the peritoneum were laden with fat, which tissue was present in only small quantities in other regions of the body. The remaining abdominal and pelvic organs presented a natural appearance. The skull and its contents were natural.

The diaphragm was pale, with the exception of those portions which arose from the bodies of the vertebræ, and retained their ordinary aspect. On closer inspection, the remainder of the muscle was seen to be mottled with pale-yellow specks; these resembled the markings often noticed in the muscular walls of a fatty heart. When examined under the microscope, this tissue was found degenerated into fat, the granules of which destroyed and took the place of the muscular structure. The heart was the seat of ordinary fatty degeneration; but the muscles of the body, such as the intercostals, the pectorals, and the psoæ, which were purposely examined after the condition of the diaphragm had been observed, were quite natural in appearance; and the same may be said of the voluntary muscles generally in the cases which remain to be described. A drawing of this diaphragm is in the museum of the hospital.

CASE 3.—In this instance, death resulted from a combination of causes, but the disease of the diaphragm had made considerable progress. A. M——, male, aged fifty-three years, was admitted into the hospital, under the care of Dr. Hue, on March 18th, 1857. It was learned from his friends that evidence of chest mischief had existed for seven months. The day before his entering the hospital symptoms of coma were first noticed; they rapidly became confirmed and persistent. When seen, the patient was in a profound coma, which continued until death. Treatment availed nothing.

The body was greatly emaciated, and the muscles generally were pale, but otherwise natural. The arachnoid was opaque, and raised from the pia mater by a quantity of serous fluid. The brain had its ventricles greatly dilated and filled with clear fluid, but there was no evidence of tubercular deposits on their lining membrane. The lungs were laden with tubercles, and were riddled with cavities. The heart was pale, flabby, and the seat of fatty degeneration. The diaphragm presented appearances like those of the heart, the crura being the parts least affected. The yellow mottling and the granular fatty change in the fibres were distinctly marked. All the other organs presented a natural appearance.

CASE 4.—In September of the same year, J. A——, a male, aged fifty-two, died in one of Dr. Farre's wards from extravasation of blood into the pons, medulla, crus cerebri and crura cerebelli of the right side, with a history of apoplexy of twenty-four hours' duration. Here also, in brief, the arteries, heart, diaphragm, and liver were spoiled by fatty degeneration.

It would be useless to enumerate other cases similar to those just related. The following history and post-mortem examination is, however, interesting as differing in many respects from those thus far referred to.

CASE 5.—E. C——, female, aged thirty-two years, was admitted on February 12th, 1856, into one of Dr. Burrows's wards, having suffered for five months from the ordinary symptoms of phthisis. From time to time, and more frequently of late, she had been subject to attacks of urgent dyspnœa, attended with pain, such as that supposed to characterise angina pectoris.

She was labouring under one of these when she was brought to the hospital. She held her hand to her heart region, was unable to lie down, and her breathing was entirely carried on by the upper part of the chest (superior intercostal). A cough, short and abrupt, was evidently affected by her inability thoroughly to expand the thorax. Her abdomen was retracted and fixed. Despite stimulants, her breathing became more and more laboured, the pain persisting, and she died seventeen hours after her admission.

The body was emaciated. The muscles were pale, but their tissue was natural. The several organs and viscera were natural, except the following:—The right heart was dilated, and both it and the left heart were affected with fatty degeneration. The bloodvessels were atheromatous. The diaphragm presented the following appearance:—Its muscular tissue was pale and wasted; it was flabby, and easily torn. On looking closely at it, a number of minute yellow specks were seen scattered throughout its tissue: for the most part arranged one after the other in little lines, which took the course of the muscular bundles. Most noticeable around the central tendon, this change became less marked towards the crura; and in the latter appeared to have made but little progress. The diaphragm was firmly adherent by the pleuræ to the lungs, which in their turn were fixed by adhesions to the remainder of the walls of the chest. It was in the portions speckled, as above described, that the fatty decay had made the greatest advance. The lungs were filled with tubercles in various stages.

CASE 6.—Another case was that of a charwoman, aged twenty-two, but old beyond her years; the mother of several children; a broken-down, ill-nourished creature. She was brought to the hospital on the morning of Jan. 12th, 1858, and was admitted into Dr. Burrows's ward. It was ascertained that she had suffered from a cough for three weeks; that she often broke out into a cold perspiration, with faintness, and urgent dyspnœa. She was, when first seen, in a dying state. Respiration hurried, shallow, and entirely thoracic; abdomen tender, retracted, and rigid; pulse 120, very feeble. Despite stimulants, she died four hours after her admission, complaining almost to the last of the great faintness, and of the embarrassed breathing.

On making a post-mortem examination, it was found that she had extensive aortic disease, with a fatty and dilated heart (foramen ovale patent), and a large congested liver. The diaphragm, like the heart, was the seat of fatty degeneration. This change, whilst it involved all that portion connected with the ribs and the tendinous arches, was absent from the crura.

That the muscle which works next hardest to the heart, and under conditions somewhat resembling its mode of action, should be liable to suffer from a similar degeneration of tissue, is sufficiently evident; indeed all which has been proved and argued for the one may with equal justice be said of the other. The unlikeness of the mode of death occurring chiefly from fatty diaphragm as compared with that from a fatty heart lies, as it seems to me, in the distress and difficulty of breathing which, from the onset, attends the former—a condition noticed only secondarily, if at all, with the latter.

But degeneration of the two muscles is apparently co-existent, and it is only a question which shall break down the sooner. When decay has spread through their tissues, a little extra strain on the breathing apparatus or on the circulation may at any moment determine the issue. These are points, however, for the consideration of the physician rather than of the surgeon. My present object is simply to draw attention to the existence of this muscular degeneration, and to suggest that it may be in itself a cause of death, or may prove, with other diseases, a serious complication.

Queen Anne-street, Cavendish-square, Jan. 1867.

A CASE
OF
FUNGUS HÆMATODES, IN A PATIENT SIX YEARS OF AGE, DEVELOPED IN A SUBCUTANEOUS LYMPHATIC GLAND ON THE MARGIN OF THE TEMPORAL FASCIA.

BY W. BIRD HERAPATH, M.D. LOND., F.R.S.*

MRS. B—— consulted me, in the latter part of 1864, respecting her little daughter, C. J. B., who had had spina bifida in the lumbar region—of course congenitally. The little patient was at that time about four years old. The

* Read at the Bath meeting of the Bath and Bristol Branch of the British Medical Association, on Dec. 13th, 1866.

tumour was small, about the size of a walnut; it had not altered in size. The skin was thin and transparent, and the tumour had not interfered with her movements from the first, as she was able to walk at sixteen months old. It had burst from accidental violence about six months before I saw it, and at that time hæmorrhage took place, but ever since it has wept or discharged a watery fluid; at times this would dry up, then the sac would refill and discharge itself again. Her mother said that the tumour affected her head, and was often the cause of alarming symptoms; these were severe headaches. At these times she shunned the light and disliked noise; but there were no convulsions at any time. She could not even go to church because of the noise of the organ; yet she liked vocal music, and instrumental also, if not too loud. She was generally sprightly and lively in character. Slight internal strabismus existed at the time of her first visit to me, and had only been noticed from the date of the accident. These head symptoms were generally noticed at those periods when the lumbar cyst was refilling and exerting pressure on the cerebro-spinal fluid, but no paralysis of either extremity had ever been observed. I was inclined to attribute these cerebral symptoms to the usual irregularities in diet attendant upon the indulgences always allowed to children with chronic and apparently incurable disease, and treated her accordingly for that paroxysm which had induced the parents to send for me.

In the month of August, 1865, this little patient was again brought to me; and then it was on account of a small glandular swelling which had shown itself at the anterior and superior margin of the left temporal muscle. It was as large as an almond when decorticated, but destitute of pain, and situated above the temporal fascia. It was *distinctly movable*. At that time I was disposed to think it of a strumous character, though, if so, the position was unusual, and no other glandular tumours existed.

I saw her again on the 18th of September, 1865; and in one month it had increased in size, and was then as large as a walnut, but showed no appearance of softening or suppuration. But at that time I strongly recommended its extirpation, as its appearance had become somewhat doubtful, to say the least of it.

Oct. 4th, 1865, was the last time I saw the child for some months; the parents refusing to have any surgical operation performed, although the tumour was nearly double the size when last seen.

On the 25th of April, 1866, she was again brought to me; and now it had grown to the size of a cricket-ball. And from this date no further doubt existed as to its nature. It was decidedly of a malignant character, and of course medullary sarcoma or fungus hæmatodes. The spina bifida was observed to decline and decrease in proportion as this cephalic tumour increased; and at length it disappeared altogether and healed up, so that at the time of her death the scar was very little apparent.

In May last her mother caused a photograph to be taken of this little patient; but although the tumour at that time must have been much larger than a cricket-ball, yet, as the carte de visite was taken from the healthy side, nothing whatever of the disease is perceptible from this view. But in July it had grown to be larger than her own head, and was very irregular in form, distinctly nodulated, and the surface traversed by large venous trunks. It had attained its maximum at that time, and it occasioned considerable distortion of the left eye, by elongating the lids, and pulling them outwards.

On July 31st we were hastily summoned, as alarming hæmorrhage had taken place from a large vessel having given way; yet the ulceration was only superficial, and much hidden by the hair. During the first two weeks in August ulceration progressed extensively; a large ulcer opened upon the centre of the fungoid mass, and several of the secondary tubera also made deep and ragged ulcers with everted edges; whilst early in August she became paralysed on the right side, losing the use of both the arm and leg. During the last month frequent loss of blood occurred, blanching her body, and reducing her strength exceedingly. She never complained of much tenderness or pain, but an intense itching of the surface annoyed her. Occasionally she would scream out as if a sudden pain had seized her, but these attacks never lasted long; they were probably shooting or lancinating pains, but she was too young to describe them. During the whole of the last two months she was wholly confined to the bed, as the weight of the tumour (about 8 or 9 lbs.) prevented any other position than the recumbent one. Her power of deglutition failing her, as well as her speech, she became incapable of taking any nourishment, and during the greater part of last month she took nothing daily but a few tablespoonfuls of beer, which she had always relished better than anything else, and she gradually sank from exhaustion and anæmia, death closing the scene very tranquilly, without convulsions or loss of consciousness, on August 31st, 1866. She was at the time of her death six years and two months old, and, for her age, tall and well formed, being four feet two inches long when measured for her coffin.

The treatment consisted throughout in the administration of sedatives occasionally to promote sleep and quiet, and the application of styptics to control the hæmorrhage. The tincture of sesquichloride of iron, and slight pressure with dossils of lint, succeeded effectually. Occasional tonics, with quinine, were at first given, but latterly no medicine was employed. The offensive odour was controlled by the use of a dilute solution of hypochloride of soda as a local disinfectant, and when sufficient was employed it was perfectly effectual.

The friends were very averse to any post-mortem examination being made, and only with difficulty were prevailed upon to have even a photograph taken of the case. This is a very successful effort, and for which I am indebted to Mr. Barton, of this city. It gives a very clear and faithful view of the figure and the extensive ulceration at the time of her decease. It would have been very interesting to have examined the perforation of the skull, and to have traced the existence of secondary deposits in the viscera; but if any such deposits existed they must have been formed very latently, as no symptoms of their presence existed throughout the case. I apprehend there can be no doubt that the primary seat of the malignant disease was in a subcutaneous lymphatic gland, situated above the temporal fascia, and at the anterior border of the temporal muscle; and the case is further remarkable for the extreme youth of the patient in whom this extraordinary growth was developed.

Bristol, Dec. 1866.

ON THE

ADAPTATION OF ARTIFICIAL PALATES.

By GEORGE PARKINSON, M.R.C.S.,

DENTAL SURGEON TO CHARING-CROSS AND WEST LONDON HOSPITALS.

HAVING formerly been house-surgeon at King's College Hospital, under Sir William Fergusson, my attention, soon after taking up the dental specialty, was directed to those cases of fissure of the palate, whether congenital or morbid, which were not amenable to surgical treatment, and having now had the experience of forty-eight cases treated on the principle hereafter described, I feel justified in introducing the apparatus to the medical profession. It sometimes happens in cases of congenital fissure of the palate, that the margins of the velum are so far apart as to preclude the possibility of uniting them by surgical operation, and the case then comes fairly into the hands of the dental surgeon.

There are three evils susceptible of remedy by artificial palates: first, defective enunciation; second, the escape of solids and fluids through the nasal passages; third, difficulty of swallowing.

As congenital cases require a special arrangement of the apparatus to be employed, it will be better to consider these cases first, and afterwards the more simple treatment required, where the palate or portions of it have been destroyed by sloughing of the soft and necrosis of the hard tissues. It is not my intention to occupy time and space in describing the various mechanical arrangements which have from time to time been introduced, but merely to give a sketch of the method of treatment I have found the most simple and successful, at the same time acknowledging I was originally indebted to a paper by Mr. Stearns, which appeared in THE LANCET of the year 1845, for valuable suggestions in the treatment of similar cases.

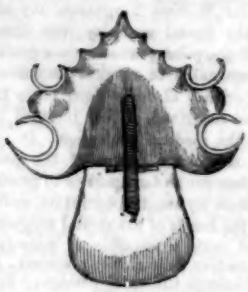
In a case of congenital fissure of the palate extending through the hard tissues and alveolar ridge, after having taken a correct model of the parts in wax or plaster of Paris, I commence by fitting a thin plate of gold over the vault of the palate, as far back as the posterior margin of the palate bone would have extended had the bony arch been perfect. To the posterior margin of this plate, by means of a hinge, is attached a velum, constructed of hard, well-polished, vulcanised india-rubber, formed in such a manner as to fit the palatine surface of the remnants of the soft palate and allow them to glide over it in

the act of deglutition. To keep the velum in its place, one end of a delicate gold spiral spring is made fast to it, the other end being fixed on the nasal surface of the gold plate representing

Palatine surface.

the hard palate. This spring must be so adjusted as just to keep the india-rubber velum in contact with the soft parts, and allow the portions of uvula on either side to approximate in the act of deglutition. Each particular case may require some slight modification, but all that I have treated on this principle have been, I think, highly satisfactory. The voice is not always immediately improved, as education of the tongue is necessary in all congenital cases. The patients for whom I have constructed these palates have, without any exception, expressed great comfort from their use, the only inconvenience ever complained of being a slight nausea on the instrument being first introduced, which generally passes off after a few minutes. The materials used are perfectly durable. The only part that could possibly get out of order is the spring; but this would only be the result of careless manipulation out of the mouth, and could easily be repaired at a trifling cost.

In constructing an artificial palate in cases where both bony and soft tissues have been lost by disease, I do not deem it necessary to have a hinge or spiral spring. I then make the vulcanite velum a fixture to the gold plate fitted to the ante-



Nasal surface.

rior part of the mouth, or construct the whole of gold or vulcanised India-rubber. In these cases the voice is immediately restored to its natural tone, and, the fluids not being permitted to escape through the nose in the act of drinking, the comfort of the patient is wonderfully enhanced. I do not think artificial palates can be adapted with advantage to children under twelve years of age, and that ordinarily sixteen is quite young enough; although I have, at the urgent desire of the parents, fitted them to patients of thirteen. In cases where the fauces are particularly irritable the bromide of potassium might be used with benefit; but never having had occasion to employ it, I cannot give an opinion as to effect.

Brook-street, Grosvenor-square, Jan. 1867.

DR. SEATON has been sent down to Carnarvon by the Privy Council to report on the outbreak of cholera. The population is less than 9000, but sixty deaths from the disease had occurred in the five weeks preceding his visit. Dr. Seaton gives a lamentable description of the sanitary state of the town, and avers "that there exists everything to invite and give intensity to an outbreak of cholera or any other infectious or epidemic disease."

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

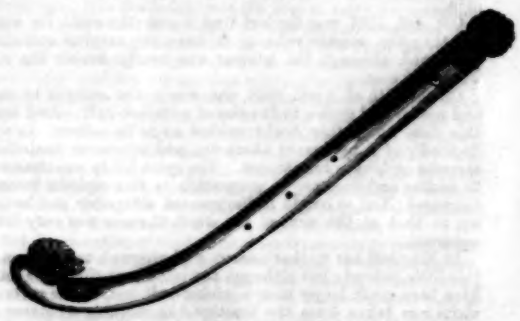
Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

FIVE CASES OF LITHOTOMY IN THE ADULT; LATERAL OPERATION ON RECTANGULAR STAFF, AND USE OF PERINEAL TUBE AFTERWARDS.

(Under the care of Mr. HUTCHINSON.)

IN all the following cases the operation performed was similar. The rectangular catheter staff was used, and was held much as an ordinary curved staff is, the operator aiming, as is usual, at the membranous urethra, and leaving the staff throughout in the hands of his assistant. The incisions were always completed with one and the same knife, and the cut in the prostate was usually liberal. After completing the operation, a curved silver tube, containing sponge, was introduced through the wound into the bladder, and retained. This tube was usually left in forty-eight hours at least; and Mr. Hutchinson holds a strong opinion that its employment not only saves the patient much pain and expedites the healing of the wound, but that it is of real importance in diminishing the risk to life. The



Improved lithotomy tube: a silver tube curved at the end to allow of its dipping into the fundus of the bladder, and containing through its whole length a piece of sponge, which projects at each end, and by which the urine is conducted.

sponge is most efficient as a conductor, and keeps the bladder constantly empty—an end which, according to Mr. Hutchinson, is not by any means always attained by the straight tubes formerly in use. The silver tube is perforated with holes to allow of sponge being fixed on its exterior should plugging be necessary; but in none of these cases was it needed. A bladder or india-rubber tube may be fixed over the end of the tube, and the bed thus kept quite dry—a point of no inconsiderable importance to the comfort of the patient.

CASE 1. *Lateral lithotomy with rectangular staff in a healthy man; rapid recovery.*—A healthy sailor, aged twenty-nine, from Yorkshire, was admitted on account of a large stone in the bladder. He had suffered from urinary symptoms for eighteen months. The stone was judged to be hard, and of considerable size. Lithotomy was performed, and an oxalate-of-lime calculus, somewhat bigger than a walnut, was removed. It was necessary to tie a vessel in the wound (superficial) after the man had been removed to bed. He recovered without an ill symptom, and left the hospital in excellent health on the forty-fifth day.

CASE 2. *Lateral lithotomy in an old man; use of rectangular staff and perineal tube; recovery.*—A man aged sixty-three had suffered severely from the usual symptoms of stone for

more than a year. He had previously enjoyed good health, but was now a good deal reduced. Lithotomy was performed, and a lithic-acid calculus as large as a pigeon's egg removed. With the exception of an abscess in the scrotum, which formed three weeks after the operation, the man did well. He left the hospital on the thirty-seventh day, and was then well recovered. He has been frequently seen since, and remains in good health.

CASE 3. *Lateral lithotomy in a man; use of rectangular staff and perineal tube; recovery.*—A soldier aged twenty-five, just discharged from the army on account of stone, came up from a military hospital. He had been in India, where his health had suffered. He was pale and thin, but not otherwise ill. His vesicle troubles had been severe; and when the differences between cutting and crushing had been explained to him, he at once chose the former operation. Lithotomy was performed, and a single large but broken lithic-acid calculus removed. After the operation he never had the slightest pain or inconvenience. The urine began to come by the urethra on the fourth day, and after the fifth none passed by the wound. He was able to leave his bed on the tenth day, and was discharged in good health within three weeks.

CASE 4. *Lateral lithotomy with rectangular staff, in a very cachectic man; use of perineal tube; favourable progress for one month; death from renal disease and pyæmia; no autopsy.*—A very feeble cachectic man, aged forty-six, who had suffered for some years very severely, was admitted on account of stone. He was much emaciated, and had been subjected to privation at home. As he suffered extremely, Mr. Hutchinson was induced to operate soon after his admission, instead of waiting to let him recruit. Lithotomy was performed, and the stone, being very soft, crumbled in the forceps, and some little delay was thus caused in completing the operation. The bladder was at length quite cleared, and was well syringed out. The perineal tube was not removed till the fourth day. He passed urine by the urethra on the fifth day. This man did remarkably well for about a month, when his wound was nearly healed. He had gained flesh, and had been transferred from the operation ward to another, being supposed to be almost well. At this date he had a slight rigor, and his urine was loaded with albumen. Symptoms of pneumonia followed, and he gradually sank. Death occurred on the thirty-eighth day. No post-mortem was permitted, but it seemed probable that the cause of death was a masked form of pyæmia. Very probably he had advanced renal disease.

CASE 5. *Calculous concretion about a fragment of broken catheter; cystitis; lithotomy two years afterwards; perineal tube; rapid recovery.*—A man, aged sixty, was sent in on account of cystitis consequent on a catheter having been broken in his bladder. He had suffered from stricture for more than twenty years; had been in the habit of passing a gutta percha catheter himself. Two years ago he broke this in and left a fragment in the bladder. One fragment came away, but there had ever since been symptoms of calculus. On sounding him a concretion was easily detected. On account of his stricture only small instruments could be used. It was found impracticable to use a lithotrite, and it was accordingly determined to perform lithotomy. He was at the time suffering from acute cystitis, and was obliged to pass his water every half hour night and day. It was loaded with pus. He was very urgent that the operation should not be deferred. Lithotomy was accordingly performed, and a large soft concretion enclosing a fragment of gutta percha bougie an inch and a half long was removed. The bladder was well syringed out, and the tube was then introduced. The relief afforded by the operation was complete and immediate; the cystitis subsided. On the fifth day the urine was passing by the urethra, and the wound was to a great extent healed. Subsequently a fragment of concretion got impacted in the urethra, and required removal by the scoop. He recovered rapidly, and left the hospital quite well in about five weeks. He attended again some months later and reported himself in good health, and more comfortable as regards his urinary organs than he had been for twenty years.

ST. GEORGE'S HOSPITAL.

A CASE OF ANEURISM OF THE THORACIC AORTA BURSTING INTO THE LEFT BRONCHUS.

(Under the care of Dr. PAGE.)

THE comparative rarity of aneurism in the descending portion of the aortic arch has been frequently noted. The obscurity of the symptoms in the following case make it well worthy of record. For notes of it we are indebted to Mr. T. Pick, pathological registrar.

Edward C——, aged forty-one, admitted Nov. 14th, 1866. The patient stated (according to the notes of Dr. Reginald Thompson) that he had been ill for seven weeks with violent cough and cold. He was the subject of winter cough, but the present attack was much more severe than any former one had been. His habits were intemperate.

When he was admitted the case was somewhat obscure, and it was difficult to account for the physical signs. The whole of the left lung, with the exception of a small portion at the base, was extremely resonant on percussion, but the respiratory murmur was absent throughout its whole extent; in fact, no air could be heard entering the lung. The right lung was also unusually resonant, and the breathing on this side was harsh and puerile. There was no bruit heard accompanying the heart sounds, nor indeed any abnormal sound about this organ. The face was slightly congested. The pulse 72, very feeble. There was a short hacking cough, with scanty expectoration. The man was in good spirits, and presented such an appearance of health that comparatively little importance was attached to his case.

On the 16th of November (two days after admission) a second examination was made; and it was then found that the resonance had entirely disappeared from the left lung, which was uniformly dull throughout. The ribs were drawn in on the left side; but they moved slightly with inspiration. There was no ægophony. On the afternoon of the same day, about four hours after this examination, he had just been visited by the nurse, and he had spoken cheerfully to her, when, before she had turned to the next bed, he cried out and fell back with a stream of blood gushing from his mouth and nostrils, and died in a moment.

At the autopsy, twenty hours after death, the body was found to be in good condition, and the rigor mortis very marked. There were soft and recent adhesions over the whole of the left pleura. The lung on this side felt solid, and sank like a stone in water. The upper lobe presented a characteristic example of diffused pulmonary apoplexy, being occupied throughout by a large diffused mass of a uniform dark colour, with the exception of quite in the centre of the lobe, where two or three decolorised patches were to be seen. The bronchial tubes were found to be full of coagulated blood. The lower lobe of this lung presented a very different appearance; it also felt solid, but, on section, was seen to be of a fawn colour, and occupied by a substance resembling, both in appearance and consistence, brain-matter. This substance was found to be continued in the bronchial tubes and their ramifications; and, by examination under the microscope, was discovered to consist of altered fibrin, being composed mainly of broken-down blood-corpuscles and granular matter, with rounded cells resembling ill-formed pus-corpuscles. The right lung also felt somewhat solid, but it floated in water. On section, it was seen to be occupied by a number of patches of pulmonary apoplexy, which were studded over it in every direction, but especially at the base. These patches varied in size from a marble to a hen's egg; they were circular in shape, circumscribed, of a dark uniform colour, and presented a marked contrast to the surrounding parts. The bronchial tubes were full of coagulated blood of the consistence of red-currant jelly. On the anterior aspect of the heart were two or three white patches of old pericarditis. The heart was uncontracted and empty. The mitral valve was slightly thickened by atheromatous deposit; the aorta was intensely atheromatous, being studded all over with patches, some as big as sixpenny-pieces, and converted into a rigid tube. The whole of the arch was somewhat dilated, but especially the descending portion and the commencement of the thoracic aorta, external to the origin of the great vessels. On the inferior wall of this portion was an ulcerated opening, large enough to admit the finger, partially plugged by a block of fibrin, which was in places adherent to the margin of the opening. The edges of the aperture were smooth and rounded, and it communicated directly with the left bronchus. The liver was fatty, and the kidneys were in an early stage of granular degeneration. The other abdominal viscera were apparently healthy.

This case is especially recorded in connexion with the state of the lungs found after death, as bearing on the pathology of the so-called pulmonary apoplexy. It seems probable, from a consideration of the symptoms of the case in conjunction with the post-mortem appearances, that when the man came under observation the communication between the aneurism and the bronchus already existed, and that the blood was slowly draining itself into the lung, retarded, no doubt, to a certain extent

by the plug which was found in the opening. This was evidenced by the dulness of the base of the lung during life at the first examination, and after death by the fact that the blood in this situation had undergone such changes as proved that it must have existed there for some time. This view of the case is further borne out by the result of the second examination two days after, when the *whole* of the left lung was found to be dull on percussion, denoting that the entire organ was infiltrated with blood; and this is corroborated by the fact that the sanguineous effusion was found, after death, to have undergone less change in the upper than in the lower part of the lung. Lastly, some sudden movement on the part of the patient most probably displaced, to a certain extent, the clot which had formed in the opening, and produced the sudden gush of blood from the mouth and nostrils from which the patient died. The main objection to this hypothesis is the fact that during life there was no hæmoptysis, which, supposing that the opening existed, ought to have been present. This, however, may be easily explained by supposing that the clot of fibrin which was found in the opening at the post-mortem, blocked up the bronchus during life in such a manner as to allow the passage of the blood downwards into the smaller bronchial tubes, but prevent its passage upwards through the mouth. And the fact that during life no air could be heard entering the lung is sufficient ground for this supposition. Another objection which might be urged is the fact that there were no definite symptoms indicating the time when the first rupture took place; but this also may be explained away by the presence of the clot. The fibrinous plug, having formed before the vessel gave way, filled up the weak part of the vessel, and thus, when ulceration did take place, prevented a sudden gush of blood, which is the cause of the well-known symptoms of rupture of an aneurism.

KING'S COLLEGE HOSPITAL.

ANEURISM OF THORACIC AORTA MAKING ITS WAY INTO THE LOWER LOBE OF THE LEFT LUNG, WHICH THUS FORMED THE SAC OF THE ANEURISM.

(Under the care of Dr. JOHNSON.)

WITH the foregoing case the following, for notes of which we are indebted to Dr. Fenn, the house-physician, may be conveniently associated. It is an example of one of the least common terminations of thoracic aneurism.

George M——, aged thirty-eight, a strong well-made man, was admitted on February 1st, 1866. He was of intemperate habits; and two years prior to his admission had rheumatic fever. About the middle of the summer of 1865 he suffered from a dull aching pain in the left side, extending from the margin of the lower ribs up into the axilla; and the pain recurred, with short intervals of relief, up to the time of his admission. During the winter he had a cough and shortness of breath, and expectorated frothy white phlegm.

On examining him, the chest-walls moved very slightly during respiration, though equally on the two sides. The measurement of the two sides was equal—namely, nineteen inches. On the left side there was dulness on percussion over the whole front and back of the chest; on the right side percussion was normal. No bulging of the intercostal spaces of the left side. There was complete absence of respiratory sounds on this side, except at the extreme apex, where a slight expiratory murmur and an occasional friction-sound were heard. Puerile breathing on right side. Heart's apex beat one inch and a half below and to the outside of the left nipple; sounds healthy. Urine contained one-eighth albumen.

During his stay in the hospital but little change took place in his condition. He was very restless, sleeping but little, owing to the pain in the left side; and the physical signs remained much the same. He was discharged on March 15th.

The patient was lost sight of from this time until the evening of December 2nd, when the house-physician was asked to go and see a man who was throwing up large quantities of blood, at his house in Clare-market. On arriving at the house he found George M—— dead, and a large quantity of bright fluid blood on the floor. It appeared that he died a very few minutes after the vomiting of blood began.

The autopsy (conducted by Mr. R. T. Smith and Mr. Wilcox) revealed the following condition:—Chest large, barrel-shaped; the right side more bulging and prominent than the left. Right lung very large, extending over to the left side of chest; left lung far back in the chest, bound down tightly by old firm adhesions extending from the apex to the diaphragm. On removing the lungs, the lower lobe of the left lung presented its usual shape, concave below and convex posteriorly, and was covered with a thick false membrane; it had a semi-fluctuating feel on pressure. On cutting into it, it was found to form a large cavity, filled with a semi-fluid mixture of pale and black coagula; the wall of the cavity was about a quarter of an inch thick, formed by thickened pleura, indurated lung-tissue, and layers of decolorised fibrin. On slitting up the aorta, a large opening of an oval shape, about half an inch in diameter, was found leading into this cavity; the edges of the opening were quite smooth, hard, and everted towards it. There was no dilatation of the aorta. The upper lobe of left lung was excavated into a number of small cavities, filled with grumous, gelatinous pulp, and lined with a thin yellow fibrinous membrane. Right lung emphysematous. Spleen large, exhibiting several fibrinous deposits beneath the capsule, of a yellowish-white colour, surrounded by a red zone. Liver healthy. Kidneys granular. Stomach nearly full of blood.

Dr. Johnson, in a clinical lecture, remarked that when this man was in the hospital there were all the signs and symptoms of an ordinary case of chronic pleurisy. It was, however, remarked that the heart was not displaced, but its apex beat rather more to the left than normal. This, it was supposed, might be explained by adhesions of the external surface of the pericardium to the chest wall. Without doubt there was at that time pleurisy with liquid effusion, but the actual cause of this—namely, the pressure of an aneurism in the interior of the lung—was not suspected. The changes which had occurred since the man left the hospital were chiefly these: a gradual enlargement of the aneurism, absorption of the liquid from the left side of the chest, great thickening of the pleura, and contraction of the side. As the stomach contained a large quantity of blood, it is probable that the aneurism had opened into the œsophagus, but this was not ascertained at the post-mortem examination.

Provincial Hospital Reports.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.

STRANGULATED HERNIA OCCURRING IN A PATIENT SUFFERING FROM HEMIPLEGIA.

(Under the care of Dr. FRANK SMITH.)

FOR notes of the following case we are indebted to Mr. Henry Brietzcke, house-surgeon:—

S. C——, aged thirty-five, table-blade striker, admitted June 13th, 1866. States that he had a sudden attack of paralysis while at work on the 4th of April last, which deprived him of the use of his left side. On admission he was suffering from perfect loss of motion of the leg and arm, and slight affection of speech. There was a reducible hernia on the left side. During his stay in the hospital he improved considerably under treatment, so much so that he was able to walk about with the aid of a stick; no power, however, was gained in the arm. He has been ruptured for thirteen years, but has never worn a truss, although the gut frequently descended into the scrotum.

On Oct. 13th, at four P.M., while walking in the grounds, he felt his rupture suddenly slip down in larger quantity than he had ever noticed before, and after trying for some time to reduce it sent for assistance.

On examination a large quantity of intestine was detected in the scrotum; the tumour was pyriform in shape, about the size of a large cocoa-nut, and on coughing no impulse was transmitted. He looked pale and nervous, and complained of great pain in the groin; the bowels had acted once the day before. The taxis was applied without success; subsequently forty drops of sedative liquor of opium were administered, and a warm bath ordered, but no relief was obtained; he vomited a bilious fluid, and the pain increased in severity. At ten P.M. an operation was decided upon. Mr. Arthur Jackson accordingly cut down and exposed the sac; he then divided a constriction at the internal ring, but the tumour could not be returned; the sac was accordingly opened, some tight bands of adhesion divided, and the rupture returned. The constricted portion of intestine was of a dark port-wine colour. It was deemed advisable not to administer chloroform, but Dr.

Richardson's ether spray was continuously applied, so that the patient felt very little pain.

Oct. 14th.—Ten A.M.: Pulse 119; temperature in axilla 97·2° F.; tongue moist, brown; hiccup; no pain; passed water. To have half an ounce of Liebig's essence of beef every hour.

15th.—Nine A.M.: Pulse 124, small; temperature in axilla 97·1° F.; tongue brown, moist; no pain; hiccup troublesome; bowels opened once into the bed; slight delirium. One grain of opium pill immediately; beef-tea; ice; half an ounce of brandy every three hours.

16th.—Tongue moist, brown; pulse 112; abdomen tympanitic, tender; temperature in axilla 97° F.; bowels confined; skin moist; red blush around wound; hiccup better.—Eight P.M.: A pyriform tense swelling has appeared in the scrotum.

17th.—The scrotal tumour was at first supposed to be gut, but on the removal of the sutures from the wound and some manipulation, a gush of dark, bloody serum escaped. Poultice ordered. One ounce of brandy every four hours.

18th.—Pulse 120; tongue brown, moist; hiccup; no pain; skin moist; temperature 97° F.; bowels confined. A director was introduced into the wound, and a quantity of puriform fluid escaped; wound gaping and sloughy. Ordered one ounce of castor oil and ten ounces of soap and water for an injection.

19th.—Enema acted once. Pulse 114; temperature 96° F.; scrotum and penis œdematous.

21st.—Pulse 108; patient feels much better; hiccup relieved; wound sloughy; scrotum and penis inflamed; oiled lint applied to protect these parts from the irritating secretions of the wound. Repeat brandy, ice, beef-tea, &c.

22nd.—Bowels confined; wounds unhealthy-looking. Repeat injection.

25th.—Pulse 100, stronger; no pain; slept well; tongue moist; bowels confined; discharge from wound purulent.

Nov. 2nd.—Wound healthy and granulating; no fluid in scrotum. Appetite good.

6th.—Wound healing.

17th.—Wound nearly healed; patient gaining strength.

24th.—Patient still weak and feeble, but he has completely recovered from the effects of the operation.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JAN. 2ND, 1867.

DR. BARNES, PRESIDENT.

ANNUAL MEETING.

THE following gentlemen were elected Fellows of the Society: Dr. F. Shepherd, Mr. Corner, Mr. Thorman, and Mr. Weller.

Dr. THOMAS FAIRBANK read a paper entitled "A Case of Fracture of the Pelvis, with injury to the Uterus, in the sixth month of Pregnancy; Recovery; Death occurring at a subsequent delivery."

Dr. JOHN SHORTT, of Madras, read notes on Criminal Abortion.

Mr. W. A. HUNT gave the particulars of a case of Fœtal Peritonitis in Utero.

Dr. PERCY BOULTON contributed a case of Paraplegia occurring during Pregnancy.

The business of the annual meeting then commenced.

The Report of the Auditors of the accounts of the Treasurer for the year ending December 31st, 1866, was read; from which it appeared that the balance in the hands of the treasurer was £96 7*s.* 9*d.*, and that during the year the sum of £50 had been invested in the Funds in the names of the trustees of the Society. The balance-sheet, read by the secretary, showed that the Society had received during the year £580 2*s.* as subscriptions from Fellows, and £51 2*s.* 1*d.* as proceeds of the sale of the Transactions of the Society.

Dr. BRAXTON HICKS, after congratulating the Society on its increasing prosperity, moved—"That the report now read be received and adopted."

Dr. PLAYFAIR seconded the resolution, which was carried unanimously.

Dr. HALL DAVIS said he had great pleasure in moving the next resolution, because he felt confident that it would be warmly responded to by the Fellows of the Society. Amidst the steadily increasing prosperity and usefulness of the Obstetrical Society of London, he said it must be admitted that the "Transactions" had been greatly enriched by contributions of its Fellows during the past two years; and it must be acknowledged that the retiring president had given the Society important aid in this respect. The Fellows have also to bear in mind that during his (Dr. Barnes's) presidency the first Obstetrical Congress, so happily suggested and carried out, had, thanks to his wise direction, assisted by the ready and unwearied exertions of the secretaries and other officers of the Society, been successfully inaugurated. And another result has been that this, the eighth gestation of the Society, has at its full maturity terminated in the happy delivery of healthy twins in the shape of two very interesting volumes. In vacating the chair which he (Dr. Barnes) had filled so worthily, with such ability and kindliness, the president would, he (Dr. Davis) was sure, carry with him into his honourable retirement from that position the Society's best wishes for his health and happiness, with the hope that he might long continue to the Society the benefits of his good judgment and experience. With grateful acknowledgment to the retiring secretary (Dr. Meadows), and to the retiring treasurer (Dr. Grailly Hewitt), he (Dr. Davis) would conclude with the following resolution:—"That the best thanks of the Society be and are hereby given to the president and officers of the Society for their services during the past year."

Dr. ROUTH seconded the resolution, which was carried unanimously.

Dr. BARNES and Dr. MEADOWS respectively returned thanks.

The List of Donations of Volumes and Specimens during the past year was read.

The following gentlemen were elected officers of the Society for the year 1867:—Hon. President: Sir Chas. Locock, Bart., M.D. President: Dr. John Hall Davis. Vice-Presidents: Mr. F. S. Haden, Dr. A. Hall (Brighton), Dr. Grailly Hewitt, Dr. Braxton Hicks, Dr. Priestley, and Dr. Wilson (Glasgow). Treasurer: Dr. Alfred Meadows. Honorary Secretaries: Dr. Gustavus C. P. Murray, and Dr. Henry Gervis. Honorary Librarian: Mr. J. R. Traer. Other Members of Council: Dr. Barnes, Dr. Corry (Belfast), Dr. Cory, Dr. Earle (Birmingham), Dr. Eastlake, Dr. Greenhalgh, Dr. Holman (Reigate), Dr. Leishman (Glasgow), Dr. Playfair, Dr. T. Pollock, Dr. Tyler Smith, Dr. Tilt, Mr. Bryant, Mr. J. T. Mitchell, Mr. Napper (Cranley), Mr. E. Newton, Mr. Oldham (Brighton), and Mr. Wm. Squire.

The PRESIDENT then delivered the

ANNUAL ADDRESS.

He congratulated the Fellows upon another year, prosperous even beyond the Society's high standard of prosperity. Against 31 Fellows lost by death or resignation, 65 new Fellows had been elected. The Society now numbered 536 Fellows and 25 honorary Fellows—a greater number than had ever before been attained. The losses by death included Robt. Hardey, of Hull; W. J. French, of Wilton; John Mackinlay, of Isleworth; J. P. W. Sydenham, of Islip; R. B. Walters, of London; Edmund Guest, of Chelsea; Andrew Sisson, of Reigate; Francis Bennett, of Gateshead; William Quarrell; and W. Middleton, of Leamington.

The finances were in a sound condition; £50 had been added to the funded property, which now amounted to £1012 19*s.* 6*d.*; and the expenses of the Exhibition of Instruments, and the Catalogue, of which every Fellow would receive a copy, as well as of the Transactions, had been paid.

The President then sketched the history of the Exhibition, and referred to some of its more striking uses. It illustrated both the history of Obstetrics and what might be called Comparative Midwifery. Instruments, the tangible and visible symbols of the thoughts of their authors, had this advantage over books: they spoke a universal language, and needed no translator. Nothing could be more curious or more interesting than the picture presented by the display side by side of the instruments used in various nations. Parturition could not differ so widely in different countries. Why, then, should the means of aiding parturition be so varied? This could be explained in part by the traditional influence of different teachers, who had guided their disciples along particular roads. Yet these roads generally converged to the same goal. This comparison of the means adopted by different persons to attain the same end would tend powerfully to dispel the prejudices clinging to the various schools, and to make each seek in the rest materials for self-improvement. This Exhibition had not

only diffused a more just mutual appreciation of the knowledge and practice of different professors, but it was certain to be productive of improvement in obstetric practice both at home and abroad. The example set by the Obstetrical Society would probably be followed by exhibitions of instruments used in other branches of surgery.

The President then invited attention to the work before them. The Society had been requested by Dr. Farr, of the Registrar-General's Department, to aid in collecting information as to the modes of treating new-born infants with a view to determining the causes of the present excessive mortality amongst infants. The most singular diversities exist in the management of children, not alone in different countries, but even in different parts of England. There must be some general physiological laws that ought to be universally respected, but which were certainly in some cases disregarded out of heedless submission to inherited customs. The Council had resolved to undertake the investigation, and the aid of every Fellow would be requested.

Another point suggested for combined inquiry was the reciprocal influence of pregnancy and epidemic diseases. Since the foundation of the Society two opportunities of collecting observations upon a large scale had occurred. There had been an epidemic of small-pox in 1863, and last year an epidemic of cholera. What was the influence of small-pox, cholera, scarlatina, typhoid, typhus, relapsing fever upon the course of pregnancy, as in causing abortion, premature labour, the death of the embryo? What was the influence of these diseases upon the course of labour, upon women in the puerperal state? What is the susceptibility of pregnant or puerperal women to be attacked? In what manner do these diseases act? What is the resultant mortality? These and other cognate questions might receive important elucidation if we could collect from all our Fellows the histories of any cases of pregnancy and labour complicated with zymotic disease which had come under their observation.

The President next adverted to the question how far a learned society might usefully seek to guide professional and public opinion, by expressing a collective judgment upon controverted points in theory or practice. He thought such decisions could rarely be pronounced without danger of lending authority to error. It was extremely difficult to isolate a scientific question in medicine from its natural or artificial complications, to reduce it to the terms of a definite proposition that could be submitted to the suffrages of a body of men. Besides, medicine was a progressive science. Doctrines were ever changing; but we were all, more or less, under the thraldom of the present doctrines. To commit ourselves to an absolute decision must either subject us to the contumely of seeing our decision reversed, when appeal was made to a more advanced tribunal, or, to the extent of what authority we had, the spirit of fresh inquiry was discouraged. It was, therefore, wiser to abandon the attempt. The last word upon any medical topic would not be uttered in our time. But this reasoning, he said, did not apply to the exercise of the function of deciding upon questions of ethics. Medical ethics formed but a branch, or rather an application, of those immutable laws of justice which had held wholesome sway over mankind in all ages. All associations formed for good purposes had been made to enforce respect for these laws. He thought a medical society would ill fulfil its duty if it shrank from upholding, in their integrity, those rules of honourable conduct by the scrupulous observance of which medical men could alone deserve and acquire the confidence of the world. In retiring, he was impelled by a deep sense of gratitude to acknowledge, that whatever success had attended his presidency was largely due to the generous confidence and ungrudging co-operation of the Council, and especially to their admirable secretaries, and to the kindly support and forbearance of every member of the Society.

At the conclusion of the address, Dr. Tilt moved a vote of thanks to Dr. Barnes for his valuable address, which was carried by acclamation.

ROYAL COLLEGE OF SURGEONS.—The first examination, in Anatomy and Physiology, for the present year, commences this day (Saturday), and will be continued on Tuesday and Wednesday. On the 19th inst., the second examination, in Surgery and Pathology, will commence, and it is stated that the candidates will have their knowledge tested in the application of splints and bandages. Other improvements in the mode of conducting examinations at the College are contemplated.

Reviews and Notices of Books.

Codex Medicamentarius. Pharmacopée Française, rédigée par ordre du Gouvernement; la Commission de Rédaction étant composée de Professeurs de la Faculté de Médecine et de l'Ecole Supérieure de Pharmacie de Paris, de Membres de l'Académie Impériale de Médecine et de la Société de Pharmacie de Paris.

THE appearance of new editions of the French Codex has not been of such frequent occurrence as to render the publication of this volume an event of small importance or of merely passing interest. There has been but one edition previously produced since the first appearance of the work in 1818. The Codex Medicamentarius, in common with many of the institutions of France, took its birth at the time of the great Revolution in that country. On the 21st Germinal, year 11 of the Revolution, a law was passed by which the Government was required to charge the professors of the Schools of Medicine, associated with the professors of the School of Pharmacy, to prepare a "Codex or Formulary of the medicinal and pharmaceutical preparations that ought to be kept by pharmaciens;" and in compliance with that law the first Codex was published. It superseded the French Pharmacopœia that was previously in authority, and of which editions had appeared, first in 1639, about twenty years after the appearance of the first London Pharmacopœia, and subsequently in 1645, 1732, 1748, and 1758. The last of these was the one used in France at the time of the Revolution, and sixty years had therefore passed without the production of a new Pharmacopœia in France, when the Codex was first published. It was issued, as the law decreed, with the authority and sanction, and by the special order, of the Government. There was a new edition of the work in 1839, after a lapse of twenty years, and now there is another edition after a further lapse of twenty-seven years. It cannot therefore be said that the French have been excessively prolific with regard to Pharmacopœias.

The present work bears much of the appearance of an imperial production. It is a handsome royal octavo volume of 830 pages. Its preparation was entrusted to a commission consisting of eighteen members, and including some of the most eminent medical, chemical, and pharmaceutical authorities of France. The commission have occupied more than four years in the performance of their task, and they have been assisted by committees of the Société de Pharmacie of Paris, who undertook special investigations for the elucidation of some of the subjects to be treated upon. There is evidence of much labour having been devoted to the work, which appears to have been carefully and ably executed.

The preface, which has been written by Dumas, the President of the Commission, explains the general scope of the Pharmacopœia, which is, to contain a list of the simple *médicaments* which the pharmacien is to keep in his *pharmacie*, to point out the conditions under which these *médicaments* are to be selected, and to describe the composition and preparation of such medicines as are artificially produced. The work is described as essentially a progressive one, which has to be altered and amended from time to time, to suit the requirements of the medical profession and to keep pace with the progress of knowledge. The complex remedies which in ancient times were so much used, are gradually giving place to more simple, more concentrated, and more energetic agents; and, in proportion as this change in the practice of medicine prevails, it becomes necessary "that the pharmaciens, to whom are committed the preparation, the preservation, and the dispensing of such agents, should be instructed, careful, and faithful." This statement refers, no doubt, to the discussions

which have taken place of late years in France on the subject of restrictions on the sale of medicines. "The time," says the learned president, "when this conviction is gaining ground even in England, enlightened by the errors which have multiplied under her eyes, and by the infinite evils which have resulted from them, is not one that should be chosen by France, who has always held that conviction, for its abandonment."

On turning from the preface to the matter which follows, we are struck with the great comprehensiveness of the work. The matter is arranged very much in the same way as it has hitherto been in our Pharmacopœias in this country, drugs in their natural state being described first, and then the various preparations which are compounded or obtained from them. The Materia Medica of the Codex is a very extensive one, comprising nearly six hundred substances derived from the animal, vegetable, and mineral kingdoms. This is a far more comprehensive list than that of our Pharmacopœia, which does not contain more than about one-third the number of substances. The descriptions in this part of the work are generally very brief; in fact, in the majority of cases, nothing more is given than the commercial name of the drug, together, if it be of vegetable origin, with the botanical name and natural order of the plant yielding it, and the part of the plant which it constitutes. Thus, for instance, we find—

"COLOQUINTE, *Cucumis Colocynthis*, L.; Cucurbitacées. Fruit."

Some of the more important drugs, however, are very fully described, and in such cases tests for determining the purity or identity of the substances are often given, as has been done in the British Pharmacopœia. We cannot help thinking that the list of Materia Medica has been unduly extended, by the introduction of a great number of unnecessary articles, some of which are worthless, and others superfluous from the fact of their possessing no advantages over other substances of similar properties. Thus, for instance, there are no less than five species of *aristolochia* and eight varieties of turpentine described. We presume the object has been to include in the list, not merely the most approved medicines, such as physicians are in the habit of prescribing, but all the substances used medicinally in any part of the French Empire. If this be the case, it will serve to explain much that it would otherwise be difficult to reconcile with the high scientific character of the French Codex. The members of the Commission could not have thought that it was essential to the successful exercise of the art and science of medicine that such substances as *wood-lice, dried vipers, crab's eyes*, and *asphaltum*, should be retained in the Materia Medica. We presume they are there because they are occasionally used in some parts of the country, where old-fashioned remedies have not yet been superseded by a more rational method of treating disease, and as long as they are employed it is considered to be the duty of the Codex to exercise a control over their use. A similar explanation or apology is no doubt due also for the appearance in the Codex of some of the preparations described there, such as the old-fashioned "Theriaca" with its sixty ingredients, "Compound Tincture of Aloes" with its sixty-eight ingredients, and *Baume Tranquille* with its nineteen ingredients. Viewing the work from a scientific point of view, these appear as great blemishes; but it must not be forgotten that the Codex has a great practical object to fulfil, which is to control the exercise of the pharmaceutic art by indicating the methods of selecting and preparing all the various remedies which are required by the existing state of medical practice in France. It must not be forgotten also, in looking at the nature of the preparations ordered in the Codex, that there is a great difference between medical practice in France and that in this country, with regard to the character of the medicines employed. The *tisanes*, *bouillons*, and other similar preparations, so frequently prescribed in France, are neither known nor appreciated here. Then they have long lists of *saccharures*, *oleo-saccharures*, *pates*, *gelées*, *chocolates*, and *syrups*, most of which are unknown to us, and unsuited to the methods of treating disease generally adopted in this country.

A considerable part of the Codex is devoted to the description of these and other similar pharmaceutic compounds; and the descriptions given are generally more comprehensive, as well as more minute, than those of any analogous preparations in our pharmacopœias. In this respect the Codex somewhat resembles a dispensatory in the character of the information contained in it.

But it must not be supposed, as so much of the work is devoted to the class of preparations commonly called *Galenical*, that due attention has not been given to more definite, simple, and concentrated preparations. The chemical substances used in medicine are fully and well described; indeed, it could hardly be supposed to be otherwise with the celebrated author of the best work ever published on chemical manufactures at the head of the Commission. Twenty-five pages are devoted in the Materia Medica part to the description of chemical products in their crude state, and native mineral substances. Then we have separate chapters devoted to simple chemical substances, and some of their applications; to mineral acids; to metallic oxides; to sulphides, chlorides, bromides, iodides, cyanides; salts of the oxygen acids; the vegetable acids; the vegetable alkalies, and the salts of these. Then there is a chapter devoted to neutral organic substances of definite chemical composition, such as mannite, santonine, digitaline, cantharidine, pepsine, &c. The whole of these chemical preparations and products occupy about 200 pages; and it need hardly be said that there is a great deal of valuable scientific and practical information contained in this part of the work.

The perusal of the French Codex cannot be otherwise than instructive; and we think it arrived very opportunely, if it has been made proper use of by those who are engaged in preparing the new edition of the British Pharmacopœia. It may serve to indicate, not only what should as far as possible be avoided in the way of encouraging or sanctioning the old system of polypharmacy, but also what may be imitated with advantage by supplying to the medical practitioner and pharmacist the kind of information best calculated to enhance the practical value of the work.

MR. BAKER BROWN AND THE OBSTETRICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—I had the *best* reasons for believing that a committee of independent Fellows of the Obstetrical Society, in whom I have confidence, would have been proposed at the last meeting of the Society, and was sorry to find that the Council would not entertain the subject. I have now, therefore, written to the new Council to say that if they will appoint a fair and impartial committee, I will place every facility in their hands for investigating my cases most rigidly. In the meantime I feel confident that the new president will not allow personalities and unjustifiable language to be used against any Fellow in future discussions; and I beg to remind all Fellows of the Society that I am in no way to be held accountable for any damage the Society may sustain by the discussion of Dr. Tanner's paper.

I am, Sir, your obedient servant,

Harley-street, Jan. 7th, 1867. I. BAKER BROWN.

THE Pollution of Rivers Commissioners will resume their inquiry into the pollution of the river Lea at Ware, in Hertfordshire, on Wednesday, the 16th inst.

THE LANCET.

LONDON: SATURDAY, JANUARY 12, 1867.

A QUESTION of some importance to provincial practitioners has lately been raised at the Gloucester Infirmary, and the consequent discussion has revealed marked differences of opinion both in the medical staff and amongst the subscribers. There appears to be a desire, on every side, that the point in dispute should be settled by an appeal to general usage and professional feeling; and this desire it is incumbent upon us to promote.

Dr. EVANS, the late senior physician to the infirmary, having resigned that office, certain gentlemen in Gloucester came forward to offer themselves for the vacant post. The election was soon found to rest between two candidates, one of whom, Dr. CHARLETON, is the house-surgeon, and has been so for more than thirty years; while the other, Dr. BATTEN, is a general practitioner in the city. Dr. CHARLETON is L.S.A. (1828), M.R.C.S. (1835), M.D. St. Andrews (1839), and F.R.C.S. Exam. (1849). Dr. BATTEN is M.R.C.S. (1857), and M.D. Lond. (1860). He took honours in various subjects and at various stages of his career, was University Medical Scholar, and medical tutor at St. Bartholomew's.

The subscribers to the infirmary being very generally inclined, according to their knowledge, to vote in the way most likely to benefit the charity, it was argued by the supporters of Dr. BATTEN that the St. Andrews degree of his opponent conferred no claim to the status of a "physician," and implied only the most ordinary knowledge of medicine; that Dr. CHARLETON had already obtained, by long service, all the advantages of experience or of *prestige* that the infirmary could afford, and might take these advantages into private practice whenever he was so disposed; that Dr. BATTEN, as a man of the highest qualifications and of exceptional ability, ought, in the interests of the public, to have all the benefits of the infirmary as early in life as possible; and that the proper recognition of Dr. CHARLETON'S undoubted merits would be to confer upon him, on his retirement from his present office, the post of consulting surgeon, to which his Fellowship of the College of Surgeons would fairly entitle him. This reasoning appeared to be so cogent that Dr. BATTEN'S success was scarcely doubtful; until a new element was suddenly introduced into the controversy.

Dr. BATTEN, as a general practitioner, attends midwifery and clubs, and derives considerable emolument from both. The bye-laws of the infirmary, strange to say, do not lay down any qualifications for the office of physician, and they do not in any way restrict the physician's sphere of practice. But one of the surgeons (all of whom are general practitioners) wrote to the several candidates, inquiring whether, if elected, they would practise midwifery and surgery. Dr. CHARLETON, who at present of course does not practise at all, is understood to have replied generally in the negative; while Dr. BATTEN expresses his intention to retire from surgery, but not from midwifery. It seems difficult to know exactly how Dr. BATTEN would define "surgery;" and opinions differ as to whether he would relinquish his clubs. Upon this, the subscribers have been moved to frame, prior to the election, rules which would compel the physicians to confine themselves to medicine. At the same time, a report has been presented by a committee charged to investigate the state of the charity; and this report advises, among other changes, the appointment of an assistant-physician and an assistant-surgeon, and the retirement of the physicians and surgeons at an age which Dr. CHARLETON has already nearly reached. With all these new suggestions before them, the perplexed governors have only decided to refer the report to a fresh committee, and to postpone the election of a physician *sine die*.

The advocates of restrictions upon the practice of the physicians have appealed to several "eminent men," whose opinions have supported theirs, but whose names, with three exceptions, are withheld; and it is apparent, from the report of the debate, that many of the governors entertain a dim notion that "general practice" is derogatory to the dignity of a physician, although legitimate enough for "surgeons."

Now, as far as midwifery is concerned, we may at once declare that to practise it is in no way derogatory. The admission of accoucheurs to the Fellowship of the College of Physicians is conclusive evidence of the opinion of the profession upon this point; while the restrictions upon the practice of the medical officers of London hospitals, or of most hospitals to which schools are attached, has no reference to any question of fancied "dignity," but solely to the need for punctuality and regularity in the discharge of their duties, and applies to the surgeons as much as to the physicians.

But, to go to the root of the matter, is there any "dignity" in the status of physician to which other members of the profession have no claim? Can the governors of the Gloucester Infirmary, by their votes, either increase or diminish the professional rank of a graduate in honours of the London University? Can they place him in so high a position as to make his present useful and honourable avocations degrading to him? Or can they elevate a graduate of St. Andrews to be his professional equal or superior? If they can, it is time that many of the beliefs which we owe to modern enlightenment should be unlearnt, and that fond delusions about one faculty should be abandoned.

It is quite certain that the advocates both of restriction and of freedom will be able to find precedents elsewhere. We know at least one county infirmary with a senior physician who practises, not only midwifery and surgery, but even pharmacy. We know another in which "pure physicians" are insisted upon, and in which the senior physician has all the consulting practice of the district. The result has been that clever young men have come from London to take office in the hospital; that they have waited in vain for fees until their capital or their patience was exhausted; and that then they have resigned in disgust to make way for successors like themselves.

At Gloucester, the retiring physician—Dr. EVANS—has been advocating perfect freedom for his successor with great vigour and ability. He does not appear to carry with him either his colleagues or the general professional opinion of the city.

In our judgment, the question at issue is very simple. We think it is in no way derogatory to the dignity or office of phy-

sician to do anything that a practitioner who is not a physician may do legitimately. On the other hand, it is manifest that no physician or surgeon can hope for consulting practice in a place where he competes for ordinary practice with the surgeons who might otherwise call him in. A young physician to a provincial hospital would, therefore, if his action were quite unfettered, be greatly guided by the prospect he might have of being called in by his brethren. If there were already consulting practitioners enough, in full possession of the ground, he would be likely at first to do any professional work that came to his hand. If changed circumstances opened for him a different sphere of action, he would be likely to retire from competition with general practitioners; and he would do so with a knowledge of their duties and with an experience of their trials which, if rightly used, would greatly assist in enabling him to gain their confidence. We assure the governors of the Gloucester Infirmary that they may safely give their votes to the candidate whose medical qualifications they deem the most satisfactory; that they may safely leave the private work of the physicians to be determined by their own discretion; and that the only practices derogatory to professional dignity are a neglect of duties for the sake of ease, or an abuse of opportunities for the sake of gain.

WHEN we lately spoke doubtfully as to the applicability of the term "preventable" to a large class of disease which seems clearly enough to depend upon the bad sanitary conditions of the people, we spoke advisedly. It is very easy to see that the frequency and mortality of great classes of disease are to be associated with a want of the most elementary conditions of health. But the supply of these is a matter of the utmost difficulty. Theoretically it would appear easy enough. But it is not so in fact. Air and light would seem to be things very cheap, and about the only things that the very poor might be expected to be able to buy. But it is becoming more and more doubtful whether we have yet discovered a plan for supplying, on anything like practical terms, these prime necessities to those who really supply the basis of the bad health of the community. If this be so, the conclusion is that we should not too hastily and lightly use the word "preventable." If we cannot solve the problem of providing the poor with light and air in sufficient quantities, how much more difficult should we find the task of supplying them with proper food. Let there be no misunderstanding. There can be no doubt that the bad hygienic conditions of the bulk of the people determine the importance, if not the existence, of the most fatal diseases—those of the epidemic and constitutional classes. But we lull ourselves into a false satisfaction by too summarily concluding that we can control these conditions. We admit that the diseases are preventable. We demur to too hastily characterising as preventable the conditions on which these depend.

We may seem to our readers to be too unsanguine in this view. But we venture to believe that it is too well founded. The successive attempts—we might say, the failure of successive attempts—to provide suitable dwellings for the poor is very unsatisfactory, and the sooner the fact is faced and studied the better. For the last twenty years philanthropists of all kinds have been most laudably trying the experiment, and the most sanguine of them do not maintain that they have succeeded. Not long ago a committee of the Society of Arts gave its attention to the subject, and reported that the building of dwellings for the poor was not commercially remunerative; that the returns were only five per cent., and that all the committee could do was to recommend uniformity of sanitary laws and certain amendments in the property law. Statesmen of great eminence have suggested the removal of the poor, not out of the land, but out of the towns; but there are great difficulties in the way of carrying out this proposal. There still remained the Architects, the true specialists for this grievous ailment in the body social, and we were delighted to find a few weeks ago that they were to have a discussion on the subject. But we are bound to confess that we have been more depressed than encouraged by the discussion. And if any of our readers are still of opinion that the provision of suitable dwellings for the very poor is an easy matter, we refer them to the late numbers of the *Builder*, the report of the paper of Professor KERR "On the Problem of Providing Dwellings for the Poor," and the discussion thereon. The only points upon which the Institute seemed agreed were, that the problem was very difficult of solution, and that the special proposal of Professor KERR was particularly objectionable. In regard to both of these points, and especially the latter, we entirely concur in the general opinion of the Institute. We had better come to no conclusions than come to wrong and objectionable ones. But let us not prejudge Professor KERR, who is entitled to the credit of having undertaken a most difficult duty. The Professor's views may be briefly summarised. He says, and with much truth, that all the model dwellings so far erected are greedily taken by the better class of the labouring community, such as skilled mechanics, small masters, general dealers, home workers, piece-workers in their own homes, and a large proportion of single females. Such are, according to the Professor, the very *élite* of the working community. Below these are the great mass of labourers and hangers-on, men and women who live from hand to mouth, and who may be said to exist rather than to live. The problem is to provide suitable dwellings for these. The rents of the PEABODY buildings, and of those of Miss COUTTS and Alderman WATERLOW, are altogether beyond the means of this class. Professor KERR's details as to some of the conditions of the poor in the middle of London are very interesting. Fifteen hundred rooms were visited in the parish of St. George, Hanover-square, by Mr. HENRY ROBERTS, a Fellow of the Institute, with the following results:—

"There were of dwellings consisting of three rooms and upwards only 8¼ per cent.; of two rooms, 28 per cent.; and of one room, 63¼ per cent. This result brought out one fact which ought to be accepted as a fact—namely, that 63¼ per cent. of the labouring classes occupied but single rooms. Then with regard to beds, it was ascertained that there were but 13 per cent. of the dwellings which possessed three or more beds, 44 per cent. two beds, and 43 per cent. only one bed."

There is no account here of poor without beds. But doubtless there are not a few of these. Mr. HANSARD's description of the poor in Bethnal-green illustrates another difficulty in the solution of the problem under discussion. In the recent outbreak of cholera, he tried to improve the water apparatus by putting taps and ball-cocks to the cisterns or water-barrels, but in a fortnight there was not a cock or a ball to be seen, as they had been carried off and sold. This is the population, then, for whom better house-accommodation is wanted. Their

chief characteristics are that they are poor and very easily satisfied. They have few wants, little taste, and a keen appreciation of any movable thing that is convertible, on an emergency, into cash. The difficulty is to give them such a house as they can pay for, and as will pay the landlord a reasonable rent. Their means of pay are precarious and scanty. But their physical wants are very much the same as those of other men, and, if not supplied, land them in epidemic and constitutional disease, to the great cost of the public. Prof. KERR speaks rather disparagingly, too disparagingly we think, of the efforts of philanthropists. He disapproves of State assistance. He has only one suggestion to make. It has the virtue of great simplicity. He sees no solution of the difficulty but in the provision of one-roomed houses. In such houses he saves the cost of partitions. He further keeps down the cost by dispensing with all refinements of cooking apparatus, such as taps, boilers, oven-ranges, &c. He maintains that there is a large proportion of the poor who may, with no violence to delicacy, live in single rooms; and that even for the remainder, single rooms do not involve such violence to delicacy as the well-to-do classes may think. Without denying that the poor have delicacy of feeling, he argues that this is a thing of degrees, and that we must be practical and not sentimental in our views of this matter. The short answer to Professor KERR is that the poor are now living in single rooms. This is the *status quo*. It may be very true that many of the poor are satisfied with their one room. But the belief of society generally is that this arrangement is very unsatisfactory. Delicacy of sentiment is one of the very first things to be encouraged as a means as well as an end. And it is vain to look for more morality and more health in the community unless we can manage to give in the dwellings of the poor the first conditions of delicacy and health. It is to the credit of the Institute of Architects that this proposal of single rooms was felt to be quite a retrograde one, and, on every view, a poor solution of the difficulty. Architecture is adorning the principal parts of our great towns; and for this it has our admiration. But we should like to see it more practical. Until then Professor KERR should not despise the assistance of the philanthropic or even of the State. In the last result the nation is responsible for the poor; and it is only a little extension of our present principle to save them from becoming paupers. Among the great means to this end is the provision of better houses for the very poor, towards which the Institute of Architects has not yet helped us so much as we think it might have done, and as we hope it will yet do.

IN addition to the competitive schemes for supplying the metropolis with water of an improved quality, from the Welsh mountains, or the lake districts of Cumberland and Westmoreland, which we noticed last week, two other plans have been published, both of them based on the principle that before gigantic works are undertaken for bringing water from long distances we ought to make sure that what we want is not obtainable nearer home.

Mr. W. AUSTIN, C.E., has a theory that by going down to the lower green sand basin which underlies London a supply of wholesome soft water sufficient for ten millions of people could be secured. From the outcrop of the lower green sand at Sevenoaks on the one side, and St. Albans on the other, there is a curved dip, with its deepest point just underneath London; and Mr. AUSTIN proposes, by means of an improved system of telescopic artesian wells, to pierce this stratum, which he believes to contain an unlimited store of the purest water, that, having fallen as rain on the areal outcrop, has soaked down to the lowest dip of the sand. The wells would be 2000 feet deep, each one costing about £20,000, and delivering four million gallons in twenty-four hours, so that with fifty such wells two hundred million gallons would be raised daily. An experimental well might be sunk for about £10,000.

Mr. TELFORD MACNEILL, on the other hand, asserts that we must depend on the Thames to supply our needs, and that, by the means and with the combinations described, he can guarantee an unlimited quantity, of pure quality, "without injury to the river or annoyance to its (*sic*) inhabitants." Mr. MACNEILL'S project contemplates conducting to the Bagshot sands, and spreading over them, the waters of the Thames (taken just above the weir at Teddington), together with the water from the green sand hills south of Guildford; gathering the water again by means of catch-water canals or cuts, after its perfect filtration through these purifying sands; and reconducting it in a covered conduit to a service reservoir at Norwood, whence it may be supplied to the centres of distribution of the existing companies. A total daily supply of 200 million gallons is assumed to be required, and the quantity to be abstracted from the Thames would be 125 million gallons per day, the residual 75 million gallons being furnished by the filtering district and from Guildford. The area of the filter itself is 22½ square miles; and it would have to be so prepared as that a rainfall of five-eighths of an inch in twenty-four hours would be absorbed, and this amount regularly distributed would give the 200 million gallons required. The stored water would be in contact with sand, perfectly protected from the contaminating influence of light and air until actually drawn for use in the metropolis, whither it would be conveyed in a brick culvert eighteen feet in diameter, constructed to transmit 400 million gallons per day. The cost to deliver 200 million gallons per day to the Norwood reservoir would be £5,000,000.

Medical Annotations.

"Ne quid nimis."

THE COLLEGE EXAMINERSHIP.

As we anticipated, the election last week at the College of Surgeons safely landed Mr. Cock, the next senior member of the Council, in the much-wished-for haven of the Examiners' Board. The election was, in fact, all but unanimous, as, presuming Mr. Cock, on the principle of the bishop's *nolo episcopari*, to have voted for some other member, there were but two other names mentioned, or rather written; for it must be remembered that the election takes place by "each member of the Council placing in the balloting box a slip of paper containing the name of such Fellow of the College, *whether a member of the Council or not*, as he may think fit and proper to be elected an Examiner of the College." Two members of the Council, bearing in mind the passage in the bye-laws which we have placed in italics, had the consistency to inscribe the names of two eminent Fellows *not* on the Council as candidates in their opinion most worthy to fill the vacant office. Neither

of these gentlemen, however, had more than a single vote, though both were well qualified for the office.

We cannot pretend to understand the tactics of the gentlemen who have been returned by the electors of the Council—the Fellows of the College—as reformers, when every opportunity of making a reform in the mode of appointing to the several offices of the College by which the requirements of the Charter should be for the first time fulfilled, is allowed to slip quietly by without any united effort being made. We can only hope that they are harbouring their strength for the mighty effort of carrying into effect their own resolution of August last—that no examiner shall hold office for more than ten years. Mr. Cæsar Hawkins, who was elected in 1840, has gracefully bowed to the wishes of his brethren, and has withdrawn, regretted and honoured. Mr. South, who was elected in 1848, and Mr. Luke, who took office in 1851, appear incapable of viewing their position in the same light that every one else does, and show no tendency to avail themselves of the "happy despatch" so kindly pressed upon them. Under these circumstances the Council will only stultify itself if it allows many weeks to elapse before it takes the initiative under the 20th section of the Charter of 1843, with a view of declaring that it does *not* think fit that these gentlemen should any longer hold office.

There will thus be more than one opportunity, before long, for the Council to show its determination to carry out the spirit of the Charter by appointing examiners *ab extra*; and the only way in which the Fellows can assist in this is by regularly, and with even-handed justice, removing from the Council the senior members who are also examiners, and who at present have such weight as to render any effort to oppose them well-nigh hopeless. Four members will necessarily have to submit themselves for re-election during the present year, and we hope to see them all replaced by younger if not abler men.

ACCIDENTS FROM THE FROST AND SNOW.

THE unusually severe weather which prevailed last week could not fail to influence the character of the accident cases admitted into the metropolitan hospitals. As regards their number, however, so far from this being increased, it was actually diminished. This is a noteworthy circumstance. It would seem that even the treacherous footing to be obtained in ice-bound streets is less disastrous to passengers than the stream of traffic which is usually flowing. It is from the wheels of carriages in our overcrowded thoroughfares that hospitals, as a rule, obtain their accident cases. It will be seen that several persons employed to throw snow off the roofs of houses were injured by falling through skylights. This seems to show remarkably little care, on the part of householders, for their skylights, to say nothing of the lives and limbs of those they employed in securing the safety of their roofs.

At the *London Hospital*, the house-surgeon (Mr. Llewellyn) tells us that on the four days, January 2nd, 3rd, 4th, and 5th, the accidents were less than half the average of corresponding days in other weeks, and there were not so many fractures as usual. Amongst those admitted were one case of fractured thigh-bone, four of either one or both bones of the leg, with two of severe compound fracture of both bones. The sufferer in one of these cases was a clerk who had slipped down whilst being attacked by robbers. He literally "fell among thieves." There were besides a number of cases of sprained wrist and ankle, contusions, and two of fractured arm. One of these was a young man, who, in sliding, fell on his back with his arm behind him and broke the humerus about its middle. Three persons, aged respectively sixty-eight, fifty-nine, and twenty-two, were affected with frostbite of the fingers.

The week was an unusually quiet one at *St. Bartholomew's*. So many works had been stopped by the weather, and the street traffic was so much diminished, that remarkably few cases of accidents presented themselves. A case of frostbitten toes, and a few simple fractures from slipping down, are all that Mr. Humphry, the house-surgeon, has to note.

At *Guy's Hospital*, the slippery pavements produced five cases of accident—three fractures of the leg, one of the knee-cap, and one of the arm. Besides these, Mr. Henry Denne, house-surgeon, informs us that a man was admitted on the 2nd inst. with frostbite of both feet, and two cases of frostbite of hands were treated as out-patients.

Two cases were admitted into the *Middlesex Hospital*—an old woman with both bones of the leg broken, and an old man with Pott's fracture. Both of these occurred, Mr. Chaldecott, house-surgeon, says, from merely "slipping-up." In the out-patient department there were the following:—Six fractures, seven sprains, nine contusions, fourteen cuts. The great majority of these occurred from falling into skylights, &c., whilst clearing the snow from the roofs of houses.

At *St. George's Hospital*, a man, who had been collecting ice from a canal, came in with frostbitten hands. There were large bullæ on the fingers. Mr. Ring, the surgical registrar, informs us that several persons were attended as out-patients who had fallen down on the Serpentine or in the streets and damaged themselves more or less severely. In two cases the collar-bone was broken, in one the arm, &c. In two instances, men employed in clearing roofs had walked through skylights, concealed by the mass of fresh snow, and fallen. One had thus broken his leg; the other, besides being much shaken, was cut about the hands. Another man broke his leg by the slipping of a ladder on the frozen pavement. A child broke its thigh from slipping on the pavement. A young man was brought in dead after falling on the ice in the park. A post-mortem examination showed the sinuses of the brain full of black blood, with an atheromatous state of cerebral vessels. A youth fell whilst skating, and struck the back of his head. He was insensible for some time. On recovering consciousness he had vomiting, and was delirious during the night. When admitted he was suffering from headache, double vision, and symptoms of pneumonia.

Several cases of fracture were admitted into *St. Mary's Hospital*. Mr. De Tatham, house-surgeon, tells us that one of them was very severe. A woman carrying a bundle in the street fell upon a slide. Both bones of the leg were broken, the fracture extending into the ankle-joint, the ligaments of which are ruptured. A dustman was leading his horse, which fell, and knocked him under a passing waggon, the wheel of which went over his leg, producing extensive contusion but no fracture. Two cases of simple fracture of the leg from slipping on the pavement were admitted, and one of contused hip. In the out-patient department numerous scalp wounds and cut faces received attention. On the morning of the 5th, a man, who had been occupied all the preceding day in clearing away and handling snow, presented himself with both hands frost-bitten. Since then several cases of similar nature have been treated.

At *King's College Hospital*, we are informed by Mr. Welch, house-surgeon, the frost has not brought more accidents than usually present themselves. Three cases of broken arm, and one of dislocation of the shoulder, were treated. One man, who was engaged the whole of Friday in carting away snow, had all his fingers frostbitten. Another, a brewer's drayman, had the toes on his right foot frozen on Saturday night.

At *University College Hospital*, the number of slight injuries, cuts, bruises, sprains, &c., was nearly double the average, and there were several fractures, including (Mr. Langmore, the house-surgeon, tells us) two of the patella, as well as some dislocations.

UNWHOLESOME MEAT.

DR. LETHEBY read a paper in December before the Association of Medical Officers of Health upon the supply of meat to the metropolis, in which he pointed out the means and

measures that were adopted by him, and the success that had attended his exertions, to prevent the sale and consumption of unwholesome meat in the City. He noticed that were it not that facility is offered by the salesmen for the detection of fraud his subordinates would be very much crippled in their operations; and it is gratifying to be able to acknowledge this fact. To supply nearly three and a half millions of people about 600 tons of meat are brought to market daily, and nearly 600 tons of meat unfit for consumption have been condemned and destroyed during the past six years. Much of this would have certainly produced serious disease in the community. Allowing six ounces a day to each person, it represents nearly 600,000 meals. Scarcely, however, one meal to each of 600,000 people, because the same joint or piece would probably serve for a second dinner in many instances; but yet diseased meat is sold at a cheaper rate and in bits, and would therefore be pretty equally distributed, so that we may fairly say that nearly half a million persons would be prevented eating diseased meat once by the labours of Dr. Letheby and his inspectors in one year. So vigilant are the latter that a channel for the sale of diseased meat has been found in another direction than the City, which one would have imagined would be the spot where most facility would be found for its disposal. But it is in the suburban and outlying districts that markets are found for bad meat. To arrive at such a result as that attained in the City has required an amount of labour and thought of which people have little notion, and of which they take little heed, comfortably seated in their clubs or at their tables at home; but the facts we have mentioned may give the public greater confidence and should teach them that the services of our hard-working medical officers of health are not to be estimated by the monetary value which is placed upon them. One thing urgently needed is a power placed in the hands of Custom-house officials to seize bad meat, a quantity of which is openly imported to us every day, and thus to make a thorough onslaught on the practices in districts beyond the control of the City itself.

It may be well to give Dr. Letheby's description of good and bad meat, and every housewife or buyer should be familiar with it. "Good meat is neither of a pale pinkish nor deep purple tint.....It has a marbled appearance, from the ramification of little veins of intercellular fat; and the fat of the internal organs especially is firm, hard, and suety, and is never wet, whereas that of diseased meat is soft and watery.....The feel of healthy meat is firm and somewhat elastic, and hardly moistens the finger.....Diseased meat is soft and 'wet'..... Good meat has but little odour, and this is not disagreeable; whereas diseased meat smells faint and cadaverous.....Good meat bears cooking without much shrinking or losing much of its weight, but bad meat shrivels up and even boils to pieces; this is due to the larger proportion of watery and gelatinous material, and the absence of fat and true muscular substance in the meat. Under the microscope the fibre should be clear and well defined, and free from infusorial animalcules; whilst that of diseased meat is sodden and tumid, as if it had been soaked in water, the transverse striæ are indistinct and wide apart, and minute organisms, such as vibriones, abound in it."

ANOTHER NAVAL GRIEVANCE.

As it is authoritatively stated that the new naval warrant is out of the hands of the Admiralty officials, and is only waiting the confirmation of the Treasury, which of course has to provide any extra emoluments which the warrant may grant, we think it a good opportunity to call attention to a pecuniary detail in which the medical service is most unfairly treated in comparison with every grade of the "executive" rank. Vessels employed on *surveying service* must of course carry a surgeon, or an assistant-surgeon, or both, according to the number of the crew; and, from the nature of the work and the constant exposure of those employed in the survey, the sick-list is not likely to be lighter than under ordinary circumstances. The doctor has to participate in all the disagreeables of the voyage, the long absence, the rare communication with land, and hence the frequent and long-continued use of salt provisions, which, in more than one instance, we know to have had a most injurious effect upon an assistant-surgeon's constitution; and yet he is the only officer to whom no extra "surveying pay" is granted, as will be seen by the following extract from an official document annually prepared and laid before Parliament.

APPENDIX No. 10.

Statement of the Rates of Surveying Pay of Surveying Officers provided for in the Estimates of 1866–67.

	s.	d.		£	s.	d.
Captains	13	6	...	1	0	0
Commanders	8	0	...	1	0	0
Staff-Commanders ...	8	0	...	0	15	0
Lieutenants	5	0	...	0	6	0
Paymasters	7	0	...	0	8	0
Masters	6	0	...	0	15	0
Sub-Lieutenants ...	2	0	...	0	4	0
Second Masters ...	2	0	...	0	8	0
Midshipmen	2	0	...	0	2	6
Master's Assistants ...	2	0	...	0	2	6
Civilians	6	0	...	0	12	0

It will be observed that every grade of officer in a sailing vessel is thus provided for, except the surgeon, even to the midshipmen and master's-assistants. It may possibly be urged, that the medical officer has no actual extra duties connected with surveying; but though this is a mistake, as we shall show presently, the same argument would apply with even greater force to the paymaster, whose routine duties such special service could in no way affect. He, however, is allowed from 7 to 8 shillings a day, more even than the lieutenant. But the surgeon is the only scientific representative on board ship, and probably the only person conversant with botany and zoology, to say nothing of meteorology, with which the master is perhaps more or less acquainted. Upon him, therefore, it devolves to keep the meteorological record during the ship's voyage, and, as far as possible, to investigate the flora and natural history of the several countries he may touch at. That this duty is ably and energetically performed, and in a manner, not only to merit the satisfaction of the naval authorities, but to elicit scientific recognition at the hands of our learned societies, is well known; and yet the surgeon has the satisfaction of feeling that his brother officers are in the enjoyment of extra allowances during the whole of their service, whilst he is bound down to the regulation daily pay.

In the list of officers entitled to extra surveying pay, it will be noticed that the class "civilians" is provided for very handsomely; and at first sight this might be thought to include all members of the "civil" as opposed to the "military" branch of the profession. This is not so, however, and the meaning is simply, that if the Admiralty authorities were obliged to employ a naturalist, or botanist, out of the service, to do the very same duties which are now done by the surgeon *in addition* to his regular work, they would be prepared to give him *extra* pay. There can, therefore, be no ground for refusing an allowance to the medical officers of surveying vessels, and we trust that the Admiralty authorities will see that the surgeon's name is included in the next series of estimates, and that, if possible, a direct order upon the subject is inserted in the forthcoming naval warrant.

"NOBLESSE OBLIGE."

THE fashion is gaining ground daily for medical men in consulting practice to have their residences at short distances from town, and thus to be enabled to enjoy fresh air in the intervals of their labours. No one can find fault with such an

arrangement if, as is almost universally the case, the physician or surgeon leaves his medical knowledge, so to speak, in town, and neither seeks nor accepts professional occupation in the country. Were the case otherwise the local practitioner would not unnaturally look with jealousy upon the advent of a professional brother, whose presence he might otherwise gladly welcome, both for good fellowship and for the occasional assistance he might derive from a second opinion under circumstances of emergency. The exceptions to the well-understood rule we have mentioned we are happy to believe are few and far between; but there appears to be a forgetfulness of it in some quarters, which requires a gentle reminder. Suburban residents are very apt to run up to town, and take a second opinion without their regular attendant's knowledge, and any attempt to check such a proceeding would be impossible, as tending to interfere with the liberty of the subject. No harm is done thereby except that the patient feels, or ought to feel, that he has treated his doctor shabbily; for the latter would in all probability have had no objection to a second opinion, and would have recommended some consultant in whom he had confidence, instead of leaving the patient to follow his own inclination, or be guided by the dictum of an acquaintance or possibly the advertisement columns of a newspaper. It becomes a very different matter, however, when the London practitioner is willing to set up in some sort in opposition to the local medical man, and is not above being consulted by those in his neighbourhood who fancy that his opinion must be of greater value from the fact that his body undergoes a railway journey of so many miles daily. When the guinea fee is "accepted" at such rare and yet regular intervals as to bring the cost to the level of the "doctor's bill," the competition becomes still more keen; and should a chemist happily reside within a reasonable distance, the only remaining difficulty is removed.

A consulting physician or surgeon having his private residence in the country, has, in our opinion, no right to exercise his profession there, save as a consultant—i.e., in consultation with another practitioner. To other applications he should be deaf, since, in the country, he is "not practising;" or, if he cannot refuse from peculiar circumstances to see a patient, he should be careful to ask such a fee as shall effectually prevent any competition between himself and the local practitioners. Since the professional residence is in town, a charge for *mileage* would not only be justifiable, but advisable, under such circumstances, and would prove a complete check upon the class of people who are always anxious to drive a good bargain as respects their health no less than in other matters.

THE HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE new Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, affords a most instructive lesson in hospital arrangements. It is constructed out of two adjoining houses, with an ingenuity of design, smallness of cost, and absolute luxury of detail, which reflect the highest credit on the management and the architect. It shows most conclusively how, with thought, the best arrangements of our newest and most costly hospitals may be rivalled, and in many respects outdone, without that excessive expenditure of brick and mortar which too commonly weighs like an incubus on hospital construction.

The new hospital is arranged in five suites of rooms, each consisting of a day-room, a twelve-bedded dormitory, lavatory, hot, cold, and shower baths, and various other offices. The dormitories have a perfect through ventilation, by the arrangement of the windows, and the offices are effectively detached from them, so that there is no chance of pollution from sewer air. In four of the dormitories two of the beds are placed in a separate room, and thus become available for the occasional isolation of a patient. From the peculiar character of the cases treated, it being rare for two patients to be confined to bed in a dormitory, and from the addition of day-rooms, the cubic space and superficial area for each patient required in hospitals for the treatment of acute diseases are not needed here. The unit arrangement for barracks has been taken as the guide for the dormitories, but in the smallest dormitory this unit is greatly exceeded. The day-room, as an essential feature of ward-arrangement, and as adopted here, is altogether a novelty in hospital construction. It has been found to exercise a most beneficial effect upon the comfort and well-being of the patients and the hygienic management of the hospital. The good effect of the dormitories being used simply as dormitories, and not also as living rooms, for such patients, is obvious.

Three of the suites of rooms are devoted to females and two to males. The male side of the hospital is entirely separated from the female, and the former has beds for twenty-four adults, the latter for thirty-six. Each side has its separate airing court, with sundry arrangements for the out-door amusement of the patients. Special features of the hospital are—an electrical room, lavishly fitted with apparatus for medical purposes (described in detail in THE LANCET for Nov. 24th), and altogether unique in this country; and a gymnasium fitted with the mechanical appliances which have been found useful in the treatment of paralysis by movements, also apparatus for the exercise of epileptics.

In addition to the baths attached to each suite of rooms, a series of baths are about to be constructed in the basement of the building for the use of the out- as well as the in-patients. These comprise a Russian bath, sulphur baths, douche baths of various kinds, including the needle-bath, also ordinary hot, cold, and shower baths. The adopted plan of these baths, with reference to the space to which it refers, is a marvel of constructive ingenuity.

To the architect who devised and carried out these arrangements, Mr. Michael P. Manning, of Mitre-court, very high praise is due. Ordinarily it is considered a thankless, and at the best must be an unremunerative task, to convert old houses to a use different from that for which they were intended. But this gentleman has here clearly given himself up enthusiastically to his task, and, with an apt knowledge of the hygienic requirements of hospitals generally, and of the special requirements of the hospital in question, he has contrived to show the possibility, within certain limitations, of constructing a thoroughly efficient hospital, with every arrangement taught by the most advanced hospital hygiene, without the necessity of sinking a large sum of money in bricks and mortar. For the projectors of small hospitals, the hospital in Queen-square is a most useful and valuable lesson.

But the arrangement of the hospital is not its sole claim to notice. The suites of rooms are furnished with an attention to comfort very unusual, indeed quite exceptional, in English hospitals. The furniture of the day-rooms, particularly on the female side, is not simply useful, but highly ornamental. The floors of the same rooms are covered with warm, striped, matting, or brightly coloured kamptulicon. The bedsteads are slightly ornamented, and the coverlets are of warm colours. The walls of both day-rooms and dormitories are hung with handsome engravings and illuminated texts. Thus furnished there is an air of comfort and brightness about the wards pleasing in the extreme. We might object, perhaps, to the almost luxury of the details; but this would be ungracious, for we are checked in our objection by observing that the more expensive portions of the furniture are gifts of patronesses and patrons of the hospital. Again, we should hold our criticism out of place from the consideration that the object which has here been so efficiently carried out is one in which our hospitals generally are, as a rule, lamentably deficient. We would rather tender our thanks to the management of the

hospital, or rather, we should say, to the Ladies' Committee, to which is entrusted, we believe, the furnishing, and through whose exertions the funds for this purpose have been raised, for having set so excellent an example in providing for the domestic comfort of the patients. We trust that this example will find many imitators.

The National Hospital for the Paralysed and Epileptic is one of the few special hospitals which justifies, and is justified in, its existence, as we had occasion to state at the time of its formation.

INFANTICIDE.

ON another page an analysis of the Report of the Committee of the Harveian Society on Infanticide will be found. The legislative recommendations suggested, if put into practice, would no doubt go far to check the crime against which they are directed; but the Poor-law Board, in its present temper and muddle, with its hands full of other needful work to be done, will not, it is feared, give, without a good deal of pressure, much countenance to the propositions as they stand; for they involve serious alteration in Poor-law administration; they throw more work on the already overtaxed and underpaid union medical officer, who would demand more pay; and, lastly, entail a large amount of responsibility and action upon the guardians. With regard to expense, it is true that the Committee have suggested a system of employing the mothers of bastards which shall be self-remunerative; but its establishment would require a good deal of special organisation and change in our present workhouse system, and we can estimate by past experience the difficulty of such a course. We must therefore look to the public to take the initiative in the matter, and to impress upon the Legislature the necessity of some change by which the present large mortality of infants, which is inseparable from illegitimacy, as it is now countenanced, may be lowered. The Committee most properly consider that the punishment of illicit intercourse and the crime of illegitimacy, should be borne by the man equally with the woman, which is not the case at present; and there can be little doubt that were affiliation and its due responsibilities more easily and strictly enforced, illegitimacy would be less frequent, and a great diminution observed in the death-rate of young children, for the reputed father would be compelled to furnish the means of maintaining the life of the child who now dies from sheer want. The Obstetrical Society may possibly institute an inquiry into the subject of infant mortality, and we suggest whether it would not be desirable that it co-operate with the Harveian in any investigations, the value of which would be enhanced in public estimation by the combined action of the two societies. Commendation is due to the Harveian Society for the report, and especially to Mr. Curgenven, one of the honorary secretaries, who originated the idea of the investigation, and has worked hard in the matter.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

AT the meeting of the Royal Medical and Chirurgical Society on Tuesday last, a circumstance occurred well worthy of notice, and which should act as a caution to the medical societies of the metropolis and elsewhere.

A paper was read by the medical secretary of so novel and startling a character that the Fellows could not resist their expression of astonishment and merriment at the originality of the views and the singularity of the style of its author. The paper in question had a peculiar title, and professed to deal on a broad principle and in a practical sense with a number of symptoms which the author wished to connect with a common origin. We purposely refrain from mentioning the name of the author, the subject of his paper, or the theory which he enunciated. Our duty is simply to record facts. At the conclusion of the reading of the paper a very curious and instructive discussion took place, from which the following facts were elucidated:—The paper had been sent to the Society by a gentleman who was not a Fellow, and without the recommendation of any gentleman connected with the Society. So far the transaction was in violation of the laws. The secretary had only glanced at it cursorily, and was himself as astonished as the president, the officers, and members of council were at listening to this extraordinary production. As may have been anticipated, the paper will neither appear in the "Transactions of the Society," nor will an abstract of it be furnished to the journals.

The marvel is how such a paper could ever have been received and not returned to the author. The respected president, whose urbanity and kindness are proverbial, seemed to be ill at ease during the reading of this remarkable document, and we may state that many of the Fellows present would have been gratified had he exercised his undoubted prerogative of stopping the honorary secretary in what was evidently to him a painful task. Dr. Alderson, however, has exercised the functions of president in such a manner during his term of office as has entitled him to the respect and gratitude of his constituency. We feel assured that should any occasion arise in the future he will act with the firmness and dignity which are essential to the important office he holds. We are, moreover, fully convinced that if he had been aware of the manner in which the paper in question had been placed in the programme of the Society's proceedings he would have saved the Society from an infliction which is almost without parallel. As president, however, he had a right to assume, as he did, that the obnoxious paper had been subjected to the tests which the rules of the Society require. Laxity in discipline must invariably lead to grave errors. The lesson to be drawn from this proceeding it is hoped will not be lost. Some of the Fellows expressed their astonishment at having been subjected to such a singular ordeal. It is only due to the honorary secretary to state that in his explanation he exonerated himself from any charge of neglect. He was suffering from illness at the time the paper was received, and his name was associated with it in his official capacity simply. He ignored the responsibility of the paternity of such a paper, and could only say that if he had known the character of the production it would certainly have been rejected by him.

COTTAGE PROPERTY.

THE injurious effects of the ordinary English cottage upon the health of its inhabitants, whether in town or country, are too well known to need any proof. We refer to the subject only to call attention to an attempt which has been made, apparently with success, by a public-spirited lady, to remedy some of the evils resulting from overcrowding, dirt, and defective drainage and water-supply.

In the *Fortnightly Review* of the 1st November, Miss Octavia Hill relates her experiences as a proprietress of cottage property in London. Now, London cottage property is infinitely more difficult to manage than country property of a similar kind, from the fact that the owner has much less hold upon the tenant amongst the thousands of employers of a great city, than in a rural district, where the landlords are ordinarily the employers of their tenants, and have thus a direct power over them. Accordingly, we find that the bulk of such property in London and its vicinity is in the hands of middlemen of a very inferior order; men who, like the undertaker alluded to by Miss Hill, are content to make their profit indirectly, and are obliged to charge exorbitant prices on account of their numerous bad debts. "Yes, Miss," said the undertaker; "of course there are plenty of bad debts—it's not the rents I look to, *but the deaths I get out of the houses!*"

Miss Hill began her task with the fixed idea, that "the spiritual elevation of a large class depended, to a consider-

able extent, on sanitary reform, and that this again depended upon educational work among grown-up people, who must be urged to rouse themselves from the lethargy and indolent habits into which they have fallen." With the co-operation of Mr. Ruskin, the lady purchased three houses in her own neighbourhood, which were put into a state of substantial repair; but, very wisely, no new appliances of any kind were added, it having been determined that the tenants should wait for them until they had proved themselves capable of taking care of them. This is a rule which we fear has been too often lost sight of by philanthropists. The poor must be gradually educated to enjoy the neatness and order which strike the higher classes as being almost essential for existence; and the possession of a patent fire-range, and complicated, though ingenious, washing apparatus, are drawbacks, rather than otherwise, to model lodging-houses in the eyes of the poorer classes.

The success of the experiment seems to have been complete, both morally and pecuniarily. The houses are always full, and pay over five per cent. on the outlay. The inhabitants are improved in health and manners, and their landlady has the satisfaction of knowing that they regard her with feelings of respect and affection, notwithstanding—or rather in consequence of—the even-handed justice with which all rights are enforced, the rents being punctually collected, and refractory tenants being expelled. She remarks: "Nothing has impressed me more than the people's perception of an underlying current of sympathy through all dealings that have seemed harsh; somehow love and care have made themselves felt." We congratulate Miss Hill on the success of her effort, and commend her example to the notice of philanthropists.

AN HEIRLOOM FOR THE COLLEGE OF SURGEONS.

A MOST interesting addition has just been made to the library of the Royal College of Surgeons. Messrs. Moira and Haigh, the eminent photographers of Lower Seymour-street, presented to the College last week a volume containing the portraits and autographs of 250 Fellows. The likenesses are in most cases admirable, notwithstanding the difficulties under which they were sometimes taken, surgeons being proverbially always pressed for time, and sometimes appearing to forget that daylight is an essential for photography. The volume is handsomely bound in crimson morocco. It is the first of a series of four, which will contain the portraits of all the Fellows of whom it is possible to obtain sittings. As the list numbers over 1500 names it is evident that the task which Messrs. Moira and Haigh have set for themselves is a gigantic one, and when it is added that all the portraits are taken free of charge our readers will agree that no small thanks are due to the photographers for their generous gift to the profession. Such a work is of ever-increasing value. It is interesting enough now to turn over the leaves and note the names so well known to science and the faces so familiar to us in the world. What will it be, years hence, when our descendants will refer to the volumes for the "counterfeit presentment" of those whose work alone will remain to mark their place in the history of the profession?

HEALTH OF LONDON IN 1866.

THE Registrar-General fully confirms the impression we have entertained, that the mortality of London in the past year has been considerably affected by the cholera epidemic. In the Weekly Return published on Wednesday last it is stated that the mortality was at the rate of 26 per thousand during the year, which is 2 above the average—"entirely due to cholera, happily confined within narrow limits." If we exclude the epidemic area of the East London districts, the mortality among the remaining 2,430,046 inhabitants was at the rate of 24¼ per thousand, which is slightly above the average; while among the 607,945 inhabitants of the East districts the rate was 34 per thousand—the average over a long series of years for these districts being 26 per thousand. This seems to show that the influence of cholera on the year's mortality has been very appreciable in London; and that it has not been confined to the metropolis is apparent from the facts which are given relative to the principal cities of the kingdom. Ranging these cities in the order of their salubrity, we have Birmingham and Hull at the head of the list, with a mortality rate of 24 per thousand; Bristol, 25; London, 26; Edinburgh, 27; Sheffield and Dublin, 28; Salford, 29; Glasgow, 30; Manchester and Newcastle-on-Tyne, 32; Leeds, 33; and Liverpool, 42. Manchester, Salford, Birmingham, Hull, Edinburgh, and Glasgow, were healthier than in the preceding year; Leeds, Bristol, Dublin, and Liverpool (where cholera has been very fatal), less healthy. The Dublin rate is probably shown in too favourable a light, by reason of defective registration.

NOTTINGHAM.

THE reports of the various sanitary commissions, frightened into formation by the recent cholera outbreak, are now issuing one by one in printed form, and it is gratifying to see that an immense deal of real sanitary work has been done, and that the foul nooks and corners which for many a long day have courted pestilence have been cleansed, destroyed, or remedied in other ways. The report from Nottingham is a satisfactory one. It is true the cholera did not make its appearance there, but this was probably in no little degree owing to the preventive means adopted. The system of ashpits and privies has been thoroughly reorganised, under the able direction of Mr. Tarbotton, C.E. Formerly the rainfall and the drainage from adjoining parts were allowed to mingle with the night-soil, thus leading to the percolation of putrefying matters, and the evolution of offensive gases. Now, the ashes from the fires and the nightsoil are mixed together, and all extraneous fluid excluded, whilst due ventilation also is secured. The total number of cesspools cleansed during the year was 9841. Other improvements have been effected, but no *permanent* steps have been taken to prevent the pollution of the canal by sewage. This is imperatively necessary. The infant mortality is alarmingly high, an increase of 34 this year—905 children died under five years of age, from pneumonia, whooping-cough, measles, and small-pox chiefly. Last year 132 died from scarlatina, only 22 this. No less than 116 children under a year old died from convulsions, and 62 from diarrhœa, as shown by the tables given. The deaths from small-pox occurred in those mostly who had not been vaccinated. The total mortality was 24 per 1000. The report is accompanied by plans of a model privy and ashpit system well worth notice. It is to be hoped that no lull will be permitted in the prosecution of further changes and improvements.

A NEW HOSPITAL AT CREWKERNE.

ON the first day of the new year a very comfortable and useful hospital was opened for the reception of patients at Crewkerne. It had its origin in the beneficence of Mr. Bond, of that town, who had employed the building originally as a web manufactory. He gave the building to the public on condition that they converted it into an hospital. It contains several rooms, well fitted up with every convenience. As the County Hospital is twenty miles away, it is useless in cases of emergency. The establishment of the new institution will prove a great boon to the locality. All the resident medical gentlemen have consented to give their services, and the greatest unanimity has helped the exertions of the committee. This adds another to the increasing list of district hospitals, which have proved of great utility to the sick poor, and of which that at Wrington was the first in the county of Somerset.

NITRO-GLYCERINE.

THE experience of explosions from the use of nitro-glycerine urged our Government to pass the Act of last session, "On the carriage of dangerous goods," the penalties for an infringement of which will, it is hoped, check the trade in this dangerous compound. In America no one is allowed to ship or carry nitro-glycerine with passengers under a penalty of 5000 dollars; and should death result from a violation of the law, the offender is to be indicted for murder. M. Kopp, from recent experiments made with great care, concludes that the transport of the oil should be altogether prohibited, and, if wanted, made on the spot. He also found, amongst other features, that at a low temperature—and this will specially apply to seasons like the present—it crystallises in long needles, and in this condition will explode from a blow. Consequently, under the influence of much cold, it forms a solid mass of the most dangerous nature. The same observer ascribes the cause of the recent accidents to the impurity of the nitro-glycerine, which, when acid, decomposes most readily, giving off gas and producing oxalic and glyceric acids. When tightly corked in bottles or other vessels, the gas collects and exerts great pressure on the nitro-glycerine, which is then ready to explode by the slightest shock or movement. Various plans have been suggested by which this tendency may be diminished or annihilated; but the only one that really seems calculated to lessen the amount of accidents is the preparation of a very pure compound which shall not decompose. It would seem from these facts most advisable that the traffic in nitro-glycerine should be entirely stopped.

LODGING-HOUSES.

THE power to overhaul the lodging-houses of the metropolis is now placed in the possession of the authorities of the various parochial districts by the Sanitary Act of 1866. The regulations already issued for the guidance of lodging-house keepers are well calculated to prevent overcrowding and the spread of infectious diseases by the free and promiscuous contact of the lodgers. Each person who lets a house, whole or in part, in which more than one family lives, or where more than two people occupy one room, must be placed upon a register at the office of the District Board of Works; and 400 cubic feet of space will always be secured to each inmate. The ceilings and walls of all rooms must be cleansed and whitewashed four times a year. The cistern of the house must be capable of supplying fifteen gallons of water per day to each inmate. The dust-bin must be cleaned out every week, a water-closet provided for every twenty persons, and the drainage made perfect. The medical officers of health have power to inspect the premises, and penalties can be enforced against violation of these regulations.

"ONLY DRUNK!"

THE police mind is eminently ready and practical; but it is deficient in scientific caution. Because it has to deal with a great many drunken people, more or less insensible, it is apt to jump to the conclusion that insensibility signifies drunkenness and nothing else. Hence sometimes serious blunders arise, to which we have often drawn attention. Here is another. A brewer's porter, after supping with his mates and tumbling down stairs, was found, at two o'clock one morning last week, sitting on a door-step; and, as he was insensible, he was taken by two constables to the police station and locked up in a cell. They did not notice that his head was bleeding. At six o'clock the man complained of being ill, and, as blood was then observed about his head, a doctor was sent for, who ordered his removal to the workhouse; where he died the same evening. There was a wound on his head two inches and a half long, and extravasation of blood upon the brain. It is not safe that the diagnosis of the cause of insensibility, often a difficult task even for the surgeon, should be left in unqualified hands. The police are perhaps least of all fitted for a duty which requires that foregone conclusions as to alcoholism should be avoided. Disease, poison, cold, and injury, may each produce insensibility, and even a drunken man, in spite of his proverbial nine lives, may die of cerebral hæmorrhage.

SEWERAGE OF PARIS.

THE total length of all the sewers in Paris amounts now to 294 miles. *The Builder*, in giving a capital sketch of their distribution, describes the mode in which sewers are cleansed. Manual labour being inadequate, a boat (or chariot running on rails in the smaller sewers) is provided with a vertical board, which exactly fits the section of the canal of the sewer. This is pierced with two holes and placed at the head of the boat, which is carried along by the current, and pushes before it any solid matter. The obstruction offered by the board produces an eddy, which helps onward the boat in its turn, and with it, as is found by experience, the deposit below, at a rate of about two feet per minute. The quantity of water running through the large sewer varies, but is generally 140 cubic feet per second—a sufficient velocity, it is said, to carry along stones as large as an egg. One of the chief objects in view is to stir up the deposit, which is often "viscous," and which will not be carried on otherwise. It appears that great efforts are being made to carry the sewer on the left side of the Seine, and the contents of the Bievre river over the Seine, and then into it at Asnières, several miles away.

THE NEW PHARMACOPŒIA.

WE understand that the new edition of the British Pharmacopœia is on the eve of publication, as copies of the entire work are now being prepared for distribution amongst the members of the Medical Council for their perusal, with a view to their making any final suggestions to the committee; and it is confidently anticipated that it will be issued to the public not later than the 1st of March.

LORD DERBY'S Government is, we have reason to know, warmly interested in the condition of our merchant seamen, and a measure for ameliorating their grievances will no doubt be brought forward early in the forthcoming session.

AT the Lowestoft Infirmary Mr. Worthington has carried his resolutions by a considerable majority, and the probable consequence will be that the contemplated enlargement of the building will be delayed. We have reason to believe that the general feeling amongst the governors is opposed to the plan proposed by Mr. Worthington, but the long services of that gentleman, his age, and the benefits he has conferred upon the town compelled them to support him. None of the resident medical gentlemen will accept the vacant office in the out-patients' department. If it should be filled up it must be by a stranger. It is generally thought that an institution will be formed in a more central part of the town for out-patients in the first instance. This would meet with support from many influential persons in the place; and it is also thought that it would be the quickest way of establishing the system of equality at the infirmary.

THE Committee of the Seamen's Hospital Society have given up to the Admiralty the *Belleisle*, of which they were in temporary possession during the recent epidemic of cholera. Her moorings off Deptford Creek have been removed this week by the dockyard workmen, and she will be at once towed down to Sheerness. The *Belleisle* was fitted up as an hospital

ship during the Crimean war, and was sent to the Baltic. In most respects she was admirably qualified for her late work, though little or nothing was done on board last year in the matter of internal arrangements, and the dockyard yellow, with which she was coated, made her an object of abhorrence to all those whose business or pleasure took them down the river.

THE Clerical, Medical, and General Life Assurance Society was amongst the first of those which acknowledged the just claims of the members of the profession to the payment of fees by those who really employed them—the directors. No society has prospered to a greater extent than this, and it is only reasonable and fair to attribute much of its success to the liberality and justice it has displayed towards our brethren. The report of the directors on the eighth division of profits, just issued, announces the gratifying fact that, after all claims had been satisfied or provided for, the large sum of £225,830 15s. 6d. was available as profits for division.

Reports
ON THE
PRESENT SANITARY CONDITION
OF THE
MERCANTILE MARINE.

No. II.

FOOD; PRESERVED MEATS; MEDICAL COMFORTS; WATER.

As next to the question of lime-juice that of food is most important as affecting the health of the merchant seamen, we present to our readers the usual scale of provisions, agreed on by mutual consent, in British ships on oceanic voyages.

	Biscuit.	*Beef.*	*Pork.*	*Flour.*	*Peas.*	*Tea.*	*Coffee.*	*Sugar.*	*Water.*
	lb.	lb.	lb.	lb.	pint.	oz.	oz.	oz.	qrts.
Sunday	1	1½	...	½	...	½	¼	2	3
Monday	1	...	1½	...	½	½	¼	2	3
Tuesday	1	1½	...	½	...	½	¼	2	3
Wednesday	1	...	1½	...	½	½	¼	2	3
Thursday	1	1½	...	½	...	½	¼	2	3
Friday	1	...	1½	...	½	½	¼	2	3
Saturday	1	1½	...	½	...	½	¼	2	3

Lime-juice, sugar, and vinegar, as the Act directs. When fresh meat is issued, 2 lbs. to be given in lieu of salt meat, flour, and peas. Half a pound of rice is given in some ships weekly.

These quantities are sufficiently liberal. The meat is liable to shrinkage, and the condition of the beef and flour is frequently the subject of complaint. The articles, when of good quality, as in most cases they are admitted to be, are probably well suited to the taste of English sailors as the substantial portion of their aliment. For they, in common with many of the labouring class at home, often prefer salt and dry food. Even when on shore, seamen eat from choice such viands as salt fish, bacon, cheese, and the like, and with greater relish than they do fresh provisions.* But, as the time between their voyages is very short (frequently not exceeding a few days), they rarely have the opportunity of enjoying a mixed natural diet sufficiently long to counteract the ill effects of their usual regimen. For there is no doubt that the protracted use of salt provisions, however good, is injurious, from their inferior nutrient power and from their monotony. Even when no decided indication of scorbutic disease has appeared, dyspepsia and the long train of maladies of which it is the harbinger, diarrhœa, and dysentery are very common affections, which can be distinctly traced to this cause. To counteract this tendency to gastric and intestinal irritation, we would recommend that preserved potato or other vegetables should be issued at least three times a week, and that dried fruits and well-approved seasonings, as pickles, mustard, and molasses, form part of the regular dietary of all ships.

With regard to the minor articles of diet there is little to be said. Tea, coffee, or cocoa are almost invariably given daily, but are said to be often of indifferent quality, and badly prepared. Besides lime-juice, vinegar is the only article of consumption positively enjoined by law. Half a pint is directed to be issued to each man every week. Although an agreeable condiment, it seems to be of comparatively little value as an antiscorbutic. Many instances have occurred to our knowledge of its having been regularly taken, and in large quantity, by persons who have suffered from the severest form of scurvy. Notwithstanding that it enjoys the prestige of authority, vinegar is probably inferior as a prophylactic to the seasonings specified above. It should never be regarded as in any degree an equivalent for lime-juice; yet so to consider it is a common error on the part of captains, who suppose that for such substitution they have the authority of the law.

The cost of production of preserved meats, soup, and fish, has been so much reduced of late years that an occasional indulgence of this kind might, we think, be afforded. In many ships soup and bouilli are given once a week, and are duly appreciated. It is better, however, that on such days as preserved meats are given, half the usual ration of salt meat should also be issued. They are much more palatable in combination than separately. Some seamen still retain an invincible prejudice against preserved meats, from the bad character which the cheaper sorts have borne. It may be remembered that some years ago they were supplied to the Royal Navy as a regular ration two or three times a week. But through bad faith on the part of the contractors the scheme proved a failure. Much of the meat was no better than carrion or the vilest offal, and large consignments of it had to be condemned. The public disgust and indignation were strongly expressed. It was rumoured, we know not with what truth, that "Goldner's meats" were supplied to the ill-fated vessels which composed Franklin's expedition. Some portion, however, of these justly abused provisions was of fair quality. We remember them well as used in 1850–53 on the West Coast of Africa, when they were considered by no means an undesirable addition to the often restricted dietary of that wretched station. There seems to be no reason to doubt that the excellent meats now procurable would be thankfully accepted by seamen as an agreeable and salutary variety from their ordinary fare.

For the sick, at all events, preserved meats are an article of the first necessity. No culinary art can make the ordinary food of the ship suitable to men suffering from the diseases chiefly incident to seamen in tropical climates: as chronic dysentery and diarrhœa. In the Royal Navy the preserves, including mutton, soup, essence of beef, milk, jelly, &c., are of admirable quality, and are dispensed most liberally at the discretion of the medical officer. Except in those merchant vessels that carry a surgeon, no precaution seems to be taken to provide such comforts expressly for the use of the sick. Even cheap necessaries, as sago, rice, and cornflour, do not always form a part of the scheme of diet; and unless the invalid is supplied from the cabin with the little luxuries his condition requires, his chance of recovery is greatly diminished. Such aid is, we doubt not, never withheld when it is possible

* During the potato famine, as is well known, many "navvies" and others suffered from scurvy by reason of their fondness for such articles of diet, and their neglect of succulent vegetables and milk; and this was often more from deliberate choice than from any pecuniary inability to procure them.

to grant it. But where there are no passengers the cabin stores are often scanty and soon exhausted; and we fear that many a death at sea is in a great measure attributable to the lack of appropriate nourishment. In any contemplated amendment of the Shipping Act, care should be taken to cause the owner to provide a few essential medical comforts, to be scrupulously reserved for their legitimate purpose.

Extraordinary remissness is sometimes shown in the non-supply of fresh meat and vegetables while the vessel is in port. Meat is sometimes given while vegetables are withheld—a stupid omission, as the latter are hygienically of greater importance to seamen. Scurvy, as is well known, may occur with an exclusively fresh-meat diet, however plentiful, if vegetable food of a succulent character be absent. Witness the outbreak of the disease among the troops in South Africa some years ago, and the frequent instances of its appearance in prisons. Green vegetables and acidulous fruits are the natural complement of salt provisions, and care should always be taken before leaving harbour to lay in a stock of such things as may be kept for several days of the voyage—as limes, bananas, cocoa-nuts, yams, and potatoes. This obvious precaution is, we fear, as a rule, neglected. Can we wonder that, in the absence of good lime-juice or any reliable substitute, sea scurvy should so often make its appearance on a four or five months' passage home? Not long ago we met an instance of a ship lying at anchor in a tropical port, within easy access of the shore, for more than a month without making any change in the kind and quantity of food. On the score of health, the crew would have fared as well, probably better, in mid-ocean. In most cases money, we understand, is paid to the men for the purchase of fruit &c. from the bumboats; but expended in that small way it does not go far, and is as often spent in vice or in the purchase of curiosities. In a matter of so much moment to the subsequent health of the crew, and, it may be, the safety of the ship, it is surely the bounden duty of their officers to see that, when opportunity offers, all possible dietetic means be resorted to for recruiting their health and vigour.

Water in some respects plays an equally important part as food in determining the sanitary condition of merchant vessels. Were the experience so painfully purchased in this metropolis during three cholera epidemics wisely applied in behalf of this class of the community, who are often placed in situations and circumstances most favourable for the reception of the choleraic poison, an incalculable amount of valuable human life would be saved to the country. The great tidal rivers of India and China are polluted by the sewage of the enormous population that lines their banks, and are charged with every kind of impurity to a degree of which in these temperate climates we can have but a faint conception. Yet in many, if not in most, vessels this water alone is used for drinking or culinary purposes. Sometimes it is drawn from alongside for immediate consumption. Sometimes it is procured from the tank vessels after undergoing a rough and imperfect filtration afloat or on shore. The poison is concentrated, as well as diffused, by the excessive heat, which at the same time enervates and depresses the European sailor, and, combined with debility from debauchery and want of proper food, renders him well fitted to receive it in its most intense and virulent form. The mortality among our seamen in these Eastern ports from cholera, diarrhœa, typhoid fever, and dysentery is at times appalling. We have seen numerous instances of half or more of a ship's crew being stricken down—perhaps in a single night,—with the same proportion of deaths, more or less rapid, which unhappily seems to obtain in all climates and under every variety of treatment.

The deleterious influence of impure water in the causation of the first three, if not all, of those diseases is a truth which is now so well established that it is unnecessary to dwell on it. When it was less generally recognised a striking exemplification of it came within our immediate knowledge. A ship with 500 men lay in the river Hooghly for six weeks in the hottest season of 1858, and remained unscathed, while cholera fell heavily on all the vessels around us. The sanitary condition of that ship was excellent. But there was free communication with the shore, and occasionally with other vessels. The remarkable immunity from bowel disease, which we then and afterwards in similar circumstances enjoyed, appeared to be chiefly due to the fact that only distilled water was used on board. The supply was unlimited, so that the men had no excuse for making use of any other. There were a few cases of diarrhœa of no great severity, except one in a man suffering from rheumatic gout, who had been taking colchicum, and who soon succumbed, manifesting choleraic symptoms during the last hour or two of life. The superiority of condensed over natural water—if that term can be applied to the water which is derived from tropical and town-girt rivers—seems to us so marked that we would advise that, whenever practicable, the former should alone be used for drinking or culinary purposes so long as the ship remains in such localities. We observe that, in some otherwise excellent hints for the prevention of scurvy drawn up by the Seamen's Hospital Society in 1865, and published by the Board of Trade for gratuitous distribution, exception is taken to the use of condensed water, on the ground, we presume, that, from the absence of the salts of potash and other saline ingredients, it was more likely to conduce to the manifestation of scorbutic disease. Even if this position were tenable, which we are disposed to doubt, the slight advantage gained is so immeasurably counterbalanced by the risk of the most acute and fatal of all diseases, that we think, in those countries where choleraic disease is endemic, this caveat may as well be omitted.

When distillation cannot be resorted to, every means should be taken to purify river or well water by filtration, boiling, and the use of permanganate of potash, of which there should be a supply in all ships.

Water should be kept, and indeed generally is, in iron tanks, and carefully covered over to prevent the entrance of dust, soakage, and other impurities that abound in the lower part of a ship. The quantity allowed in the scale, if that include all the fresh water used by the crew, is much too small. Greater part of it must necessarily be consumed for the tea, coffee, soup, and lemonade, supposing the last to be regularly issued; and thus little is left for drinking in climates where, it must be remembered, there is excessive perspiration and perpetual thirst. We do not know whether the allowance for washing is also included. Without sufficiency of fresh water there can be neither cleanliness nor comfort. A gallon a day should be the least quantity devoted to each individual, besides a due proportion for ablution of the person and clothes, when the supply from rainfall is inadequate for that purpose. And in vessels with small crews there ought to be no difficulty in the matter. In those ships of war where, by the good sense of the captain, an unlimited quantity of water is allowed, the content and comfort attained far more than compensate for the extra cost of fuel or trouble in watering.

THE LANCET SANITARY COMMISSION.

Report
on
FILTERS, AND OTHER WATER-PURIFYING AGENTS.

No. I.

Description of the filters examined.—Experimental determination of the relative quantities of foreign matters separated by these filters from a Thames drinking-water.

THE history of the recent epidemic in London casts such strong suspicion on the drinking-water as an extensive means of communicating disease, as to render inquiries into the modes of purifying water of great importance. Some results of such inquiries form the substance of the present report.

The most obvious mode of increasing the purity of water is that of mechanical straining or filtering off matters suspended in the water. By the Metropolitan Water Act the water companies are bound to properly filter all water sent into their

mains. In spite of this Act, however, everyone knows that suspended matters are visible in most of the water supplied to London. These matters are present from imperfect action of the filter-beds, and also, admittedly in some cases at least, from a direct infringement of the Act, in letting unfiltered water into the mains. In nearly all waterworks the filter-beds are formed of sand, and hardly any doubt can be entertained that by proper arrangements such filter-beds are capable of efficiently straining water, as far as this is practicable. These arrangements are, sufficient thickness of the beds and fineness of the sand to render the water clear, and a filtering surface large enough to let through such a thickness all the water wanted, although part of the bed be unemployed during its cleansing.

It is evident from the large business done by the makers of house filters, that domestic filtration is greatly resorted to, either for primary filtration of water, or to supplement that of the water companies. On application being made to such proprietors of patent filters as we had heard of, samples of filters, and the information required, were most courteously and readily placed at our disposal for reporting upon. If we have failed to ask any owner of a special filtering apparatus to send in samples and information, we trust he will at once oblige us with a communication from him, when, if wished, his apparatus will be examined and reported upon.

All the filters at present brought before the public, so far as we are aware, are advertised as doing something more than straining water from suspended matters. They are stated to free water from some of the matters dissolved in it, and not, therefore, impairing its transparency. It is in their double capacity that we have to notice them.

The filters we have to report upon are the Siphon Filter of the London Water-Purifying Company, in which the filtering and purifying material is animal charcoal; the Moulded Carbon Filter of Messrs. Atkins and Son; the Silicated Carbon Filter patented by Mr. Dahlke; and the Magnetic Carbide Filter of Mr. Spencer.

The filtering apparatus, Mr. Danchell's patent, causes the water to pass *upwards* through the filtering material, instead of downwards, as in the ordinary arrangement. The intended effect of this is that matters spontaneously settling down are not deposited upon the filtering material, and do not therefore help to clog its pores, and further, that the suspended matters strained from the water, being separated as they always are mainly at the surface of the filtering material, fall away from it in this case and deposit elsewhere; the consequence of this effect being that the filtering material requires less frequent cleansing. The filtering material is contained in a stoneware, wide-mouthed jar, standing on feet, and perforated at the bottom. The lid, also of stoneware, is fitted water-tight into the mouth of the jar by means of a washer and clamp, and can be removed when desired for the purpose of cleaning out the filter. Immediately under the lid is a small chamber, in which the pipe delivering filtered water arises. This pipe leaves the jar either through a hole in the lid or the side of the jar, according to convenience. When it passes through the lid, it passes upwards over the edge of the cistern, on the floor of which the filter is placed, and is then carried down the outside of the cistern to a lower level than the bottom of the filter, and there terminates in a tap. In this case the pipe forms a siphon, which requires to be set in action by withdrawing the air from it before the water will flow; but it will then continue in action, unless the water in the cistern is allowed to run out. If the pipe passes out through the side of the filter, it is conveyed downwards through the floor of the cistern—at least this is the usual arrangement,—and commences to act as soon as the filter is covered with water; it will then continue in action so long as the bottom of the filter is under water. With the exception of the small cavity under the lid, the entire jar is filled with animal charcoal, in the form of charred bones, broken into small pieces, and freed from dust. There is no chamber for storing filtered water; this being plainly both incompatible with the mode of action of the filter and unnecessary. The water is filtered at the time it is drawn off for use—a point in the filter made much of by the proprietors, and it is one in its favour, though of little importance if the water is purified from organic matters by the charcoal, for then the water will not grow stale by standing in a close reservoir. The filter is readily cleansed and the charcoal renewed, which is a decided merit.

The Moulded Carbon Filter consists of a block of charcoal, stated to be formed of bone-charcoal, oak-charcoal, and coke, all ground to the finest powder, and incorporated together by pitch. This compost is then placed in steel moulds and subjected to hydraulic pressure of three tons to the square inch, and afterwards heated to a temperature of 1000° Fahr., so as to carbonise the pitch. A perforated cork is fastened into a hole in the block, and through the perforation a glass tube passes to the centre of the block. The filter-block thus prepared is placed in the upper chamber of the filtering vessel, with the glass tube projecting downwards from the block, and passing by means of another perforated cork through a hole in the bottom of this chamber into the lower chamber which stores up the filtered water. When water is poured into the upper vessel, it percolates through the block to its centre, and then passes, filtered, down the glass tube into the lower chamber. The advantages claimed for this filter are excellent mechanical filtration in consequence of the density of the cake of charcoal through the pores of which the water passes; the chemical action, not only of the animal charcoal on the organic matters, but also of the vegetable and mineral charcoal on other matters dissolved in the water not definitely described; and, lastly, simplicity of structure, and the capability of being readily cleaned by anyone. To cleanse one of these filters the block is removed and washed—if necessary, scraped,—and blown through by means of the glass tube. In this way the filter appears to be effectually cleaned by a process which could hardly be simpler.

A cistern filter is also fitted up by Messrs. Atkins and Sons, the proprietors of the moulded carbon filter. This consists of a perforated stoneware cylinder, through which all the water drawn from the cistern passes, and which contains blocks of moulded carbon packed in animal charcoal. It differs, therefore, essentially from the filter formed simply of the moulded block; indeed, it scarcely differs from a filter of the London Water-Purifying Company in combination with the moulded carbon filter. The block is claimed to have a very evident further straining action on the water which has passed through the layers of animal charcoal, to be seen in the formation of a deposit over its surface. There is, of course, also claimed for the block its special purifying effects upon the water.

A pocket filter is also to be had, formed of a carbon block and tube, to which is attached an elastic pipe and mouth-piece, which may be used either by sucking up through the pipe the water in which the block is immersed, or by hanging the pipe over the side of the vessel, so that it acts as a siphon, and causes filtered water to drop rapidly from the mouth-piece.

The Silicated Carbon Filter consists of a mass of "silicated carbon," varying in thickness according to the work to be done by it, cemented water-tight into the filtering vessel, so as to divide it into two compartments. This silicated carbon is prepared from the coke of the Boghead coal or Torbane-hill mineral—the substance which some years ago was the cause of a celebrated lawsuit, the issue depending upon the decision as to whether it was coal or not coal. The coke is ground to powder, and incorporated with pitch by the aid of heat. It is then formed into cakes by pressure, and subjected to a high temperature in "saggers," so as to carbonise the pitch. The filtering mass is arranged in the filter by placing a layer of animal charcoal, mixed with particles of "silicated carbon," between two of the prepared cakes cemented into the vessel.

The upper cake is made much more porous than the lower cake, and separates only the coarser impurities, the filtration being completed by the latter. The proprietors of the silicated carbon claim for it active properties not possessed by simple charcoal, and due to the presence of *minutely divided silica*. They also state that their filter, instead of removing carbonic acid from the water, adds to the quantity already contained by it. The filter is as readily cleaned as the moulded carbon filter, and is exceedingly simple in structure.

The Silicated Filter Company, like the proprietors of the moulded carbon blocks, also construct pocket and cistern filters; consisting of a stoneware cup, into the cavity of which is cemented the mass of silicated carbon. This cup is placed in the water, with its mouth downwards, and has joined to an aperture at the top a flexible pipe, from which the water is either drawn by suction or by carrying the pipe out of the vessel holding the water in which the filter is immersed, and making it terminate at a lower level than the surface of this water. In the regular cistern filter the pipe passes through the side of the cistern, and is closed by a tap; in the smaller kind for travelling purposes, the pipe thrown over the side of the cistern acts as a siphon when once set in action by sucking out the air. But, in either arrangement, the water passes in an upward direction during filtration, as in Mr. Danchell's filter; and there is thus obtained the advantages attendant on upward filtration possessed by this filter.

This company also supply main-service filters, suitable for attaching to the main water-pipe, or to the house-cistern. The filtering vessel is formed of tinned copper, and the water is filtered during an upward flow.

The Magnetic Carbide Filter differs from the others just described in depending not upon the action of charcoal for its effects. The substance denominated by Mr. Spencer, the patentee, the magnetic carbide, seems to be a magnetic oxycarbide of iron, differing from the magnetic oxide of iron in containing some carbon. It is obtained by heating together in close vessels hæmatite or red oxide of iron with sawdust. It is powerfully attracted by a magnet, and even possesses itself marked magnetic powers. The filter for domestic use consists of a stoneware jar, divided into three chambers—the lowest for storing the filtered water, the middle for holding the filtering material, and the top for receiving the water to be filtered. The lower partition, on which the filtering substances rest, is provided with a hole, protected by a patented invention for keeping these substances from passing through. On this partition is placed a thin layer of sand, and over this a deep layer of magnetic carbide in coarse powder. The upper partition is perforated with holes, the upper surface of the perforated part being covered by a stoneware dome, usually left open at the top, but intended to be loosely stopped with sponge when the water to be filtered contains much suspended matters, and thus to prevent clogging of the filtering bed. The properties claimed for this filter are that of removing nearly all dissolved organic matter from water, and that of retaining the power of doing so for an unlimited period, and of therefore needing no renewal of material, unless water with much suspended matter is allowed to pass through it, or water highly charged with carbonate of lime in solution; for then the filter may become clogged, and consequently require cleansing. The filtering material is not readily got at; but used with the water ordinarily supplied to towns, to do so is unnecessary. Mr. Spencer has placed it in our power to establish in these reports the correctness or otherwise of the stated *permanence of action* possessed by his magnetic carbide, a property not possessed by charcoal, and one, therefore, sufficient to place the magnetic carbide filter before all others, if belonging to it. The magnetic carbide is a substance suitable for laying down in the filter-beds of water companies, and is in use in this way at Southport and elsewhere.

We shall now record the results of our examination of the effects of a sample of each of the filters described upon the water of one of the Thames companies. These filters were a small new cistern filter on Mr. Danchell's plan; a new simple moulded carbon filter; a new silicated carbon stoneware jar filter; and a domestic magnetic carbide filter some time in use, considerable delay having occurred before a new filter on this construction was forwarded to us for a reason afterwards to be referred to.

Some gallons of water were passed through each filter before use. After draining, portions of the same water were passed through each. A litre of this water before filtration, measured at 15° C., was evaporated to dryness. During the evaporation the temperature was kept as nearly as possible up to the boiling without causing ebullition. The source of heat was a small spirit-flame, protected by a glass shade from draughts. The entire evaporation was executed in a platinum vessel—the same in which the residue was weighed. Freshly dried carbonate of soda, in weighed quantity, was added towards the close of the operation; and the evaporation concluded partly over a water-bath and partly in an oil-bath, in which it was maintained at a temperature of from 120° to 130° C. for two hours. The platinum dish, with its contents, were then weighed with the usual precautions, and from the weight found that of the platinum dish and cover, and of the carbonate of soda added, was deducted. The carbonate of soda served to destroy any chloride of magnesium present in the water, which would otherwise have been decomposed towards the end of the evaporation, so as to cause some dissipation of the dissolved matters. The residue, therefore, included all the matters contained in the water, except any minute quantity of ammonia which may have been in it. The platinum dish and its contents were then ignited, for the purpose of burning off the organic matter. After cooling, the residue was treated with a solution of carbonic acid, in order to supply that which might have been lost by the carbonates of lime and magnesia. After evaporation over a water-bath, and drying for two hours in an oil-bath, kept at a temperature between 120° and 130° C., as before, it was again weighed. The difference between this and the former weighing showed how much matter had been dissipated by the ignition, very nearly all of which must have been organic or carbonaceous. The ignited residue, after having been weighed, was treated with acid, in order to see that the combustion of the organic matter had been complete. A litre of each of the portions of water passed through the filters was treated in the same way.

The results of these experiments were as follows:—

	Solid matters in 100,000 parts.	Organic matters.
Unfiltered water	29·10 ...	1·80
Danchell's cistern filtered water	14·90 ...	·45
Moulded carbon filtered ,,	31·27 ...	1·10
Silicated carbon filtered ,,	27·65 ...	·90
Magnetic carbide filtered ,,	28·45 ...	·05

During the evaporation of the unfiltered water it acquired a marked yellowish-brown colour, and deposited coloured carbonate of lime. It also evolved a heavy odour, and after the addition of the carbonate of soda this became stronger, and more of a urinous character than anything else. The dried residue was of a high brown colour, and at the commencement of the ignition evolved the odour of burning animal matter. It was water supplied just after a heavy rainfall following dry weather.

The water taken from the moulded carbon filter exhibited much the same characters as the unfiltered water, only a very little milder in degree. The odour evolved during the evaporation was not so unpleasant, and was not of the urinous character. The coloration of the water was not so marked, though very considerable. It will be seen from the above table that, either by straining off suspended particles, or by removing matters dissolved, or by both means, there was a decided re-

duction in the quantity of organic matter in the water, and more than was to have been anticipated, judging from the appearance of the evaporated residue. On the other hand, the total quantity of foreign matters was actually increased, most probably from matters being dissolved out of the block by the water.

The water from the silicated carbon filter was highly alkaline from the presence of free lime. It gave little deposit during evaporation, and acquired very little colour or odour. The residue was nearly white. Half the organic matter—and that the part most obnoxious, to the senses at least—was removed according to the results of this experiment.

The water from the Danchell filter remained free from appreciable colour or odour even when the carbonate of soda was added, and preserved its transparency almost to the last. The residue was white when dry. It will be seen from the table that three-fourths of the organic matter were removed; but probably more than this was removed, as particles of the charcoal may have passed through—a result not unfrequent with this filter,—and this would of course be estimated as carbonaceous or organic matter. The other matters were also largely diminished, in consequence, as was found out, of the abstraction of nearly all the carbonate of lime held in solution.

Lastly, the water from the magnetic carbide filter presented the same phenomena during evaporation and afterwards, except that carbonate of lime was freely deposited as the evaporation proceeded, and that the total solid contents of the water were greater owing to the presence of this carbonate of lime. It must be remembered that this filter had been some time in use. The organic matter, however, was almost entirely removed.

These experiments were carried out with every care; but even so, some latitude must be allowed for imperfection in operating, more especially in the weighings of the platinum dishes with their contents. It is due to the interests of the proprietors of the filters that such a statement should be made. Any error, however, higher than one in the first decimal place is improbable. It is also necessary to remark that these experiments will be greatly increased in value when taken in connexion with others of a different nature.

We shall next record the action of permanganate solution on the filtered waters, but must defer doing so till our next report.

REPORT
OF THE
COMMITTEE OF THE HARVEIAN SOCIETY ON INFANTICIDE.

On Thursday, the 3rd inst., the Harveian Society held its annual meeting, when the President (Dr. Tyler Smith), with the permission of the Society, instead of delivering an ordinary address, confined his remarks to the question of Infanticide, which has occupied the attention of the Society during the last session. At the meeting on May 17th, 1866, after a discussion on the subject, it was resolved "that a committee should be formed to draw up a report, with the object of suggesting the best means for checking the crime, and to report on the causes of death in young children, the best means for preventing excessive infant mortality, and to suggest some plan for the care and rearing of illegitimate children other than the present workhouse system." The Committee have held seven meetings; the secretaries have corresponded with various persons interested in the subject and with the Government (who have supplied important documentary evidence), and have also made inquiry relative to practices in France, Belgium, Italy, Prussia, Sweden, and America, and in charitable institutions of all kinds; and upon material thus derived the Committee have drawn up their report.

The President then gave a sketch of the evidence upon which the suggestions of the Committee are founded—a *résumé*, as it were, of the facts and figures that had been taken into account in their discussions.

1. It seems that in England the illegitimate births amount to about 6½ per cent. In 1864 there were born in England 47,448 illegitimate children, the total births amounting to 740,275.

2. The gross number of illegitimate births between 1860 and 1864 inclusive—i.e., in five years—amounted to 227,661, or more than a quarter of a million. It is this great mass that demands very careful and special study, for the evil which it represents is unhappily an increasing one.

3. In 1830 the number of illegitimates was 20,039; in 1860 it was 44,157. The entire population according to the Census in 1830 was 13,896,797; in 1861 it was 20,066,224: that is to say, in thirty years the population had increased rather less than half, but illegitimacy had more than doubled itself.

4. The life of the bastard is infinitely less protected than that of the legitimate: the birth of the former is coupled with disgrace; the maintenance of the child is undefined and uncertain; poverty is about it, and the ties and safeguards of home are wanting. The bastard finds the lot of an inferior animal rather than that of a human being.

5. The conditions under which a single woman is delivered are fraught with danger to her offspring. She endeavours to be, and often is, delivered secretly; her *enceinte* condition is disguised by all means from the master and mistress, if she be a servant; and a large class of mothers are domestics. No preparation for the confinement is made, for the discovery of the pregnancy involves the loss of character; and hence the temptation to destroy the child and to hide its body is strong, and often prevails. The best fate that awaits the discovery of pregnancy is admission to a lying-in hospital; but this is often a difficult matter, and the woman must generally work hard up to the time of delivery. When confined, she becomes, perhaps, a wet-nurse, and puts her own child out to dry-nurse; and though the mother may be reclaimed, the child suffers by death. Dr. Tyler Smith, in his experience of twenty-five years, had seen but few instances in which the child lived beyond infancy. The payment of from three to five shillings a week was often demanded for its keep; and this the poor single woman could not afford, except she managed to obtain a good situation as nurse. A large number of single women delivered in workhouses are helpless when they are discharged. Unable to earn money, dishonesty or prostitution alone enables them to exist, whilst the child dies in the struggle.

6. A large number of illegitimate children get to the workhouse, and amongst these young paupers the mortality is enormous, being 90 per cent. during the first year of life.

7. Infanticide crops up in unusual forms, as in wholesale murders; or through unusual agencies—for instance, in the north of England children are entered into burial clubs, and often when money is wanted the infant is allowed to die.

8. Dr. Tyler Smith then referred to preventable causes which swell the list of illegitimacy—viz., the promiscuous lodging of the sexes where large masses of the working population are congregated, as in harvest and hop-picking; the overcrowding of the poor; the excess of women over men; the fact that in some towns bastardy is most rife though immorality in general is not so openly displayed—for example, in Westmoreland and Cumberland, where 9 per cent. of the total births are illegitimate, this high rate being ascribed to the comparative absence of systematic prostitution; the "ganging system" which prevails in Norfolk, Suffolk, Huntingdon, and other parts, also aids, for sometimes as many as 100 boys and girls are collected together for work, without suitable provision being made for their lodging, and hence debauchery is a necessary result.

9. The Committee have found no evidence in favour of foundling hospitals; experience has shown that they are liable to great abuse, where children are indiscriminately received—a practice that encourages illicit intercourse, abandonment of the child, and other ills. Children require constant and continuous attention, which they do not get in hospitals, and miss on their way thither. Out of 14,000 admissions in one institution, 4000 only lived to get into service—i. e., 70 per cent. died early. A like bad result has been the experience of America and other countries.

10. With regard to affiliation the law requires revision, and great stress is laid upon this by the Committee. The present system tells hard on the mother, not the father; the former has the burden of maintaining the child until sixteen, under penalty of punishment. If the single woman marries, the husband must support her (another man's) child; and the guardians rarely proceed against the reputed father: so that since the repeal of the old bastardy laws, illegitimacy, as shown by statistics, has increased enormously. Under present circumstances, it is difficult for a woman to get evidence against her seducer, who often absconds before the confinement. The Committee have not suggested any special alterations, but feel that the law bears hard upon the woman. Affiliation ought to be more easy of execution, and the nominal sum allowed per week for the maintenance of the child increased in amount. The difficulty of getting an allowance rests with the woman, and the Poor-law Board are not permitted to aid her, so it rarely happens that she gets continuously the pittance allowed by law; hence the Committee think that the father should be made jointly responsible to the Poor Law.

11. In regard to punishment, the Committee agree with the recommendations of that on Capital Punishment: that a less severe kind of sentence would be a greater check upon the crime of infanticide; that penal servitude or imprisonment should be given to anyone *who injures a child during birth or during seven days after*. The present law is too severe to put in force, and proof of *actual birth* is difficult or impracticable to define legally, so that justice is defeated.

12. Dr. Farr's suggestion to chronicle the births and deaths of all still-born has met with unanimous acceptance, for this is the only means by which foul play can be detected; and further provision has also been made in the recommendations in order to prevent anyone from receiving or tending any child that is not known to be supervised by some medical man.

The following are in substance the recommendations proposed in resolutions by the Committee:—

1. That the registration of all births should be compulsory.
2. That all still-born children should be registered; and that certificates of death should be received only from medical men or certified and competent midwives.
3. That in cases of still-born children, when neither a medical man nor a certified midwife could attest, the Poor-law medical officer should inquire into the case; and that he should be empowered, if he think it desirable, to acquaint the coroner with the fact of its birth, who would then hold an inquest upon the case.
4. That the register of an illegitimate child in any other name than that of its mother, or of an illegitimate child as a legitimate one, should be punishable offences.
5. That the crime of infanticide should no longer be punishable by death; but that the recommendations of the Royal Commission on Capital Punishment should be adopted, and the offence be considered as murder of the second degree.
6. That evidence of complete separation of the child from the mother should not be required to constitute still-birth; but that it be held sufficient that the medical and other evidence prove that the child was alive during birth, and that it died from violence or neglect.
7. That a single woman certified as pregnant by a medical man should be enabled to make a declaration of the father before a magistrate when there is reason to believe that he is likely to abscond before the birth of the child.
8. That any pregnant woman, being destitute, should be admitted into the workhouse, by application, about the eighth month of pregnancy, on condition that she consent to remain four months after the birth of her child, unless she could show that she could fairly provide for the proper support of herself and her child.
9. That after the period of four months had elapsed, the mother, if a single woman, should be allowed to leave her infant in the workhouse; but that the guardians should be empowered to recover from the mother *a portion only* of the sum required for the maintenance of the child.
10. That the guardians should have power to recover from the father a weekly sum towards its maintenance, and that the process of recovery should be assimilated to that of the recovery of the cost of keeping the deserted children left chargeable to the parish.
11. That laundries, or some other means of remunerative occupation, be established for the self-maintenance of mothers during their stay in the workhouse.
12. That a classification of pregnant women and mothers should be adopted in workhouses, whereby the respectable married and single women should be separated from the vicious and more depraved class in the maternity and nursery departments.
13. That in the rearing of children left in charge of the guardians a colonising system should be adopted, such as that pursued by the Foundling Hospital, and similar to that followed under the old Poor-law system.
14. That no person be allowed to take charge of an illegitimate child to nurse who is not registered as a fit and proper person, and that she and the child or children in her care should be under the supervision of the district Poor-law medical officer. Any person acting as a nurse to an illegitimate child, and not being registered, should be liable to a penalty; and penalties should be enforced in all cases of neglect or ill-treatment. That no nurse be allowed the charge of two children without the sanction of the Poor-law medical officer.
15. That no single or married woman should be allowed to take the situation of wet-nurse whose child is not placed in charge of some person registered as a dry-nurse.
16. That there be a central authority or superintendent appointed by the Poor-law Board to carry out the provisions in regard to dry-nurses, and to receive annual reports from the Poor-law medical officers as to the state of the children out at nurse.
17. That a register of dry-nurses be kept by the district Poor-law medical officer, and that certificates of fitness as regards herself and her residence be given to the nurse by the same officer and also by the minister of the denomination to which she belongs, should anyone desire to be placed on the roll of nurses.
18. That no infant or very young person be allowed to be entered as a member of burial clubs or to become the subjects of life assurance.
19. The Committee are of opinion that the establishment of foundling hospitals for the free and indiscriminate admission of infants would be attended with bad results.

The Committee summarised the causes of illegitimacy, attributing the latter chiefly to

1. The overcrowding of persons and dwellings, in cities and suburban districts especially.
2. To the custom of the public hiring of servants in some districts.
3. The "gang" system in agriculture.
4. The pernicious system of lodging which obtains during the harvest, hop-picking, cider-making, and the like.

The Committee, it will be observed, desired especially to recognise the fact that the penalties and hardships connected with infanticide and illegitimacy were felt almost entirely by the mother; indeed in only one single point has the woman any advantage, and this quite unintentionally as far as legal enactments are concerned—viz., that the crime was often not punished because the severity of the law was too great to be sanctioned by the current humanity of the day. The Committee wished also to point out that the result of all this falls through the mother upon the child at last, in the form of infanticide and excessive infant mortality, and that the burden of the original offence and cause ought to be borne jointly by the father and mother, who are equally in fault; and in the propositions they make there is nothing unfair towards the one more than the other, to the father more than the mother.

The business of the Society precluded any discussion upon the report, as sketched by Dr. Tyler Smith, but the hon. secretary observed that if it were considered desirable, one evening might be subsequently devoted to such a purpose, and he

moved that "a deputation of members of the Society be appointed to wait on the Home Secretary on a subsequent and convenient day, to lay the report before him and to urge the necessity that exists for the Government to take some steps in accordance with the suggestions of the Committee, for the purpose of checking infanticide and excessive infant mortality, and that the following take part in the deputation:—The Committee—namely, Dr. Tyler Smith, Mr. Curgenven, Dr. Drysdale, Mr. Benson Baker, Dr. Hardwicke, Mr. Ernest Hart, Dr. Lankester, Dr. Sanderson, and Mr. Sedgwick; also, Mr. W. Adams, Dr. Ballard, Dr. Camps, Mr. Birkett, Dr. Broadbent, Dr. Cock, Mr. Brodhurst, Dr. Chapman, Mr. Weeden Cooke, Dr. Hall Davis, Mr. Erichsen, Dr. Tilbury Fox, Dr. Greenhalgh, Dr. Greenhow, and some twenty-two others; some forty-five in all.

The Society then gave its thanks to the various officials for their services during the past year, and the meeting closed with a conversazione.

THE LEPROSY REPORT OF THE COLLEGE OF PHYSICIANS.

IN reading through the Leprosy Report prepared by the College of Physicians, one cannot help feeling that those gentlemen who so readily undertook the task of collecting and collating the documentary evidence have laboured through a mass of work of which the actual printed matter is but a very limited gauge. We have already expressed our opinion as to its value, and now proceed to discuss in detail the conclusions arrived at. But, first of all, it is very important to note that the collateral information, not immediately bearing upon the question of leprosy, but incidentally given in the replies which have been received from all quarters of the globe, affords us an insight into the social condition of many of our colonies, and opens our eyes to the existence of several causes which are quietly leading to the decadence of some of them. It will startle most of us to be told, for instance, that in Antigua the deaths at the present time are actually in excess of the births. This fact impresses us with the necessity of at once instituting a system of registration, which, as the rule, has no existence in our West Indian Islands for example, but which is indispensably necessary for ascertaining the hygienic state of a people, and discovering the causes that affect it. "The all but universal want of this important information in the West India colonies and in the principal cities of India will account for the general neglect of sanitary precautions amid their communities, and for the large amount of disease and the excessive mortality which usually prevail among them." (p. 75.) The results, then, of the Committee are not limited, but have a very wide applicability; and include the discovery of very many influences that materially damage and lower the tone and constitution of the inhabitants of parts and colonies which England governs, and for whose civilisation we are bound to have a care. The condition of most of the West India colonies is generally believed to be similar to that of Antigua; and the facts contained in the Leprosy Report are sufficient to excite the Government to a deliberate inquiry into their sanitation and hygiene.

The Report, which must be looked upon as *the authority* on leprosy, has a double object in view: firstly, to afford the Government information which may serve as a guide in legislating for lepers; and secondly, in regard to ourselves, as furnishing a better insight into the causes, treatment, and prevention of an almost unconquerable malady. The Government desired to know, chiefly, if it were needful to erect separate establishments for the compulsory segregation of lepers; and the opinion of the Committee, supported by a large amount of testimony received in the early part of the inquiry, is that this is by no means necessary. The Committee find little proof that leprosy is contagious; and we may consider, therefore, that measures will be taken to check, and, as much as is possible in the face of popular prejudice, to put an end to the harsh isolation of leprous subjects. This is one of the first results that we may expect. It will not meet with universal approval, for the simple reason that many facts seem to show that, in the later stages at least, the disease is contagious; still, acting on the evidence received, the Committee were justly entitled to adopt the broad conclusion they have printed.

Then we come to that view of the Report which has a direct interest to us as medical practitioners, and it is this that more particularly deserves notice in these pages. We will try—having regard to the opinions of those who have had the largest experience and been most careful in observation—to give a general description of the disease, leprosy, in its more usual forms, which may serve as a guide to the practitioner, should he unfortunately come in contact with it; then describe briefly the varieties; and, on another occasion, the appearances which it presents amongst us in England.

In the first place, it is very important to note that there is but one leprosy proper, which, however, exists in two forms—the one in which deposition or hypertrophous growth, and the other atrophy, exist more particularly; the former called the "tubercular," the latter the "anæsthetic," variety. The Committee propose at once to alter the word tubercular to tuberculated (with its opposite, non-tuberculated, of course). The non-tuberculated has been called anæsthetic, but anæsthesia is common alike to, and a leading feature in, both forms. These two forms often co-exist. Both are seen in Jamaica, Bermuda, Barbadoes, and Guiana, for instance; the tubercular form especially in Turkey and China; the anæsthetic in Southern India: but the distinction is of no great consequence. It has been generally held for some time past that in Norway and Sweden it is the tuberculated form that is chiefly seen, and that in India the anæsthetic form abounds. In the tuberculated variety there is a deposit of fibrinous material (with subsequent softening) so plainly seen in the face; and in the anæsthetic there is a deposit also, but atrophy seems to result, whilst the process of "interstitial absorption" is so fully accomplished that the bones and tissues disappear very quickly indeed, and hence this variety has been called the "joint evil." The terms "dry" and "moist" varieties have also been used.

The contents of the Report, as far as they go, distinctly show that the confusion of very dissimilar things has been common. The chief advance made in modern times in the history of leprosy is the better recognition of an eruption as one of the early conditions or manifestations of leprosy, and this is in no little degree due to the writings of Dr. H. Vandyke Carter, of Bombay. This eruption, which we shall describe presently, has been confounded with others quite different in nature—syphiloderma, ordinary lepra vulgaris. This is the case in India, Rhodes, and other places. There is one feature, however, in which the distinction is at once absolutely shown—viz., the presence of anæsthesia in the leprous patch. The base is an erythema, the circumference is raised and pinkish, the centre is dry, shrunken, and anæsthetic always; the surface is not scaly, and the centre may become white and atrophied or dark and somewhat scaly, but is always *anæsthetic;* this is diagnostic. In the tuberculated variety we have the formation of small tubercles that grow and ulcerate; in the anæsthetic we may find vesicles and small bullæ oftentimes, which give rise to ulceration in their turn. This latter condition has great interest in relation to the question of the production of such diseases as herpes zoster and pemphigus, from disease of the nerve trunks. *Leuce* is the proper name for the patches when they are white and anæsthetic; *melas* for those that are dark coloured. Simple absence of pigment, leucopathia or *vitiligo*, is not anæsthetic and not leprous, as may be seen by the reports from the Madras, Bombay, and Bengal Presidencies, from Furruckabad and Bangalore. Then lepra vulgaris, when the scales are very white (alphoides) seems to have been confounded with the eruption of lepra; and if we look to the accounts from Crete we shall see that the most wondrous confusion has been in existence in reference to the leprosy and its similarities. We have described (1), the knotty, tubercular, or elephantine, the leprosy of the Arabians (which is really the bucnemia tropica; (2) the squamous, or leprosy of the Greeks, the latter being the true tubercular form, not scaly at all—the disease described as squamous probably being ordinary lepra vulgaris; and (3) the white, or leprosy of the Jews, by

which is probably meant the leuce or white anæsthetic patch, which is by no means proved as yet to be the true Jewish leprosy. We have, then, a very certain diagnostic test in the cases of leprous eruption, the existence of anæsthesia in the centre of dry, shrunken, discoloured patches, bounded by an erythematous (vascular) ring. It is impossible to diagnose without the anæsthesia. Baras el Israily seems to hint at another kind of eruption which was peculiar to the Jews. It is described in the report from Damascus. We hear of no anæsthesia with it, but only white scales, and it seems likely to be the lepra alphoides and nothing more.

It is of prime importance that we clearly understand the anæsthetic character of the eruptive manifestation in leprosy. Its existence is often accidentally discovered by the fact of hot things or injuries not giving rise to any sensation in the part upon which they act.

The age at which the disease first commences varies very much; generally, however, about the period of puberty the first recognisable symptoms show themselves. This appears from the reports from Jamaica, St. Lucia, Guiana, the Cape, Jerusalem, Scio, Shanghai, the Bombay and Bengal Presidencies, Calcutta, &c.; but infants at birth may exhibit signs of leprosy, and sometimes in unusual forms. At St. Lucia, in the offsprings of lepers it may appear, and often does, in various forms of malformation; and at Antigua we notice that when it attacks infants there is sometimes a complete arrest of development. In the Cape it has been seen at two years of age; and a case in which it manifested itself at birth is recorded from Constantinople. It is quite clear that the tuberculated form develops at a somewhat earlier age, and, as we might have expected, kills more quickly than the anæsthetic variety. If the disease appear about puberty it is not common for those attacked to live beyond thirty-five or forty. Leprosy lasts generally in the tuberculated form on an average from nine to ten years, in the anæsthetic thirteen to eighteen years. Much depends, however, as regards the duration upon the hygienic influences and the kind of food which is obtained by the poor sufferers; for instance, at Cyprus, Dr. White says the disease often remains stationary at the leper-house of Nicosia, "the inmates not having the means of committing excesses, and abstaining generally from fat and oily food." Dr. Reynaud, of Mauritius, observes: "I have known lepers live upwards of thirty years. In the anæsthetic form I have seen the disease limited to the wasting of one arm from ten to fifteen years, without any progress of the malady or much disturbance of the health; others have lost several fingers or toes, the health still remaining good." And he expresses the general opinion when he observes "that lepers die at every age, and often there is the greatest variety in the duration of the disease—very many from intercurrent maladies, which the leper cannot resist." The same appears from the report of Dr. Carter, from Bombay. The tuberculated form then signifies the existence of a much deeper taint, and involves an earlier development and a more rapid course and termination.

The reporters differ somewhat as to the earliest signs of leprosy. This is accounted for very readily. Some have had more experience of the disease, have given it greater attention, and have watched the progress of the malady in localities where it occurs in its most marked forms.

We, in England, have been accustomed to regard the changes in the skin of the face more particularly as the earliest tangible indication of the disease, and in the Report itself, in many cases the reporters have referred at once to the changes in the skin as the "earliest signs" of leprosy; but it is quite clear that these are but the evidence of a profound alteration, in nutrition, of some considerable duration. The Committee tell us that "before the appearance of any visible or external symptom there is often, for a longer or shorter period, a feeling of general malaise," described by Dr. Bowerbank, whose experience of the disease has been large and carefully used, as "an indefinite feeling of something wrong," "chills like ague," "rheumatic pains about the extremities," "creeping pricking sensations of the limbs," "stiffness and numbness of parts," "a falling asleep of a limb, or hand, or foot, or finger, or toe"—conditions which, Dr. Bowerbank says, are referred back to a sudden change of temperature, or to exposure. Incipient lepers find they cannot pick up or handle things as others do. Then there are various forms of hyperæsthesia or disordered sensation—sometimes burning, pricking, tingling along the course of nerves, especially in the anæsthetic variety. There is clearly something wrong with the nervous system as a whole, and it is not surprising that the skin itself should undergo a change; it gets muddy, dry, or perspires freely, especially about the palms of the hands. Here and there it is erythematous, oftentimes about the face, forehead, nose, ears, giving a person the appearance of being overheated by exercise; and it is out of, and upon, these patches that tubercles develop. Of course the ordinary forms of skin eruption may complicate, and in the Norwegian leprosy scabies is frequently present in the fully developed disease. This erythematous redness we have seen distributed generally over the body in a gyrate form, closely resembling syphilitic erythema; indeed we have seen a case in London which had been diagnosed as a syphiloderm by the majority of those who had seen the case in India; *but anæsthesia existed.* The face in the tuberculated variety soon assumes a dusky appearance generally, and then deposit and thickening commence.

To explain all these changes of the surface dependent upon some disordered state of the system at large is the business of pathology; and when we look into the Report we find that this part, to which we naturally look for aid in our endeavour to form such a conception of the disease as may be of use in its treatment and prevention, contains no information whatever of a novel kind; and the Committee have not been furnished with any information in reference to the post-mortem condition of leprous subjects, save in one case recorded by Dr. Mongeri of Crete, and one by Dr. J. Davy at Ceylon. The Committee refer to Drs. Danielssen, Boeck, and Vandyke Carter's researches, which must ever form the basis for a thorough investigation into the morbid anatomy of leprosy. Yet we should have imagined that, amongst the 250 replies to interrogatories, some addition to the morbid anatomy of the disease could have been found. The inquiry of the Committee, then, has rendered great service in pointing out the sad deficiency in reference to one of the most important points in the whole matter of leprosy. Observation, as far as it goes, teaches us that the whole mucous and cellular, and the serous and the nervous tracts are involved alike in the same kind of morbid action as is the skin; that there is a change in the whole albuminous material of the body. It is as to the character of this and the special seat of its deposition that we need information. Dr. Vandyke Carter's observations would seem to show that in the anæsthetic form the deposit of foreign material is confined to the superficial nerve-trunk; whereas the researches of Dr. Danielssen and Dr. Boeck indicate that in the tuberculated form the changes are more generally distributed, involving the central organs of the nervous system, and the liver, the kidneys, the uterus, and other viscera. Dr. Carter correctly observes that "the chemical and vital pathology of leprosy has not been even cursorily examined;" and there is no doubt that an acute search into the facts of the morbid internal lesions of leprosy would very materially help us to unravel the pathology of a host of diseases which we at present vaguely trace to some lesion of the nervous system.

It is generally believed that leprosy is more common in the male than the female, but the reporters from the same locality completely differ in some cases. For example, one reporter from Corfu says, "the proportion has been one-fifth in males and four-fifths in females;" a second, "I find seventeen cases in men and only two in females." At Antigua and Barbadoes each sex seems to be equally attacked. As the Committee, however, observe, leprosy is much more frequently *seen* in males; for the women of the countries wherein it occurs are much more secluded, and are more unwilling to expose themselves when affected. Of 543 deaths amongst leprous persons in Bombay during twelve years, 409 occurred in males; still the same line of argument may apply here. The decidedly prevailing view is that males are much more commonly leprous.

The influence of race is decided. The blacks suffer first, the coloured next, and the whites last, and those of the latter who have been reared or have resided a long time in the place where leprosy is endemic. The Jews of Cairo, St. Vincent, and Jamaica seem to be very prone to it; but at Damascus and Bombay they appear to be almost exempt.

There is a vast body of evidence to show that all malhygiene, everything that tends to devitalise the body, be it insufficiency of food, uncleanliness, or bad dwellings, has the effect of hastening the development of leprosy. We can only mention two special circumstances that seem in some way to be closely connected with the true cause of the disease: propinquity to the sea-shore, and the use of tainted fish or rancid oily substances. Leprosy is not confined to sea-borders, but occurs in hilly districts. In the former, the possibility of the use of tainted fish is at once admitted, and its actual consumption demonstrated, as may be seen by the replies from the West Indies, the Cape, Egypt, Crete, Corfu, Calcutta, and Ceylon; but in the latter case, amongst the mountaineers of Lebanon for example, as has been pointed out by Dr. Tilbury Fox else-

where, the use of rancid oils (olive oil) and fatty matter (the preserved milk and fat of goats) is a common part of the daily diet. At Aleppo, again, the use of salted and cured meats, which have no doubt undergone a chemical change, is in vogue. Then, again, many lepers are fishermen. The consumption of rancid oil in Norway and Iceland is the rule. Lepers generally congregate near towns, it must be remembered; but this does not prove that they may not originally have been in the habit of coming under the influence just named; indeed, at Jerusalem stale and foul fish is eaten largely.

All observers agree that leprosy is hereditary; but the taint transmitted by parents often shows itself in a freakish way. The tuberculated may transmit the anæsthetic variety, or different members of the same family may be affected by the two different varieties; the disease may skip over one generation; one member alone of a family may be leprous. The account from Nagpore says that of 228 cases, in 40 it was hereditary: 23 males and 17 females. The disease, however, arises in instances in which it is impossible to trace any hereditary tendency.

Leprosy is said to be on the increase in some parts—Jamaica and Guiana, for example, amongst other places; in great measure, no doubt, favoured by the absence of all means for the prevention of the production and propagation of the disease. The leper is an outcast who is thought to deserve no comfort and no attempt at rescue; hence the treatment is of the most unsatisfactory kind. The whole gist of the latter part of the Report is to show the decided benefit to be derived from the adoption of means to improve the physical and moral condition of the leprous poor. There is no cure for leprosy; Medicine must therefore aim at its prevention. The Committee have clearly defined what true leprosy is, and the circumstances which we must sift for the discovery of the true cause—chiefly the peculiarity of the diet of lepers. "It seems indisputable that as the agricultural and horticultural condition of Britain advanced and the diet of the working classes was bettered, ... leprosy became less common," &c. And in reference to India the Committee observe that, "with its 150 millions of inhabitants, the question of the food of the people, in its probable relations to the widespread prevalence of leprosy and other endemic disorders, is a matter of the highest interest in an economical as well as in a scientific point of view. That a marked change in the habits of the native population will ensue upon the increase of divers industries, the improved cultivation of the land, the less frequent recurrence of famines, and the consequent amelioration of their general condition from year to year; and that better food, better clothing, and better housing, with greater personal cleanliness, will lead to the abatement of leprosy,—may be confidently anticipated."—p. lxxv.

And here we leave the matter for the present.

THE LANCET RECORD
OF
THE PROGRESS OF MEDICINE AND THE COLLATERAL SCIENCES.

ADAPTATION OF THE EYE IN AMPHIBIA.

IT has often puzzled anatomists to discover by what means the eyes of amphibia maintain perfect vision in different media, such as air and water. M. F. Plateau, however, thinks he has solved the problem. This *savant* alleges that in amphibia and fish, though the lens is nearly spherical, the cornea, or that portion of it in front of the lens, is completely flattened; and hence, optically, the difference in media is unimportant. We doubt this assertion of M. Plateau, and we still further question his statement that in these animals the ciliary muscle is not called into use during adaptation.

ARTIFICIAL AND SPONTANEOUS HORSE-POX.

We have before referred to M. Chauveau's paper on this subject. We may now mention that he has put his conclusions into systematic form before the French Academy. These conclusions are twelve in number, but they all point to the well-known doctrine of their author—that spontaneous horse-pox is really produced by contagion, and that the difference in character between it and the artificial form is due simply to a different mode of inoculation.

REGENERATION OF LOST PARTS.

In most of our treatises on physiology it is alleged as a wonderful example of vitality that the limbs of the newt are regenerated after amputation. This assertion, however, must now be somewhat qualified. In a memoir lately published M. Philippeaux states that when the scapular portion of the extremity is removed with the humerus, no regeneration occurs; but when this bone is left behind, complete regeneration takes place in about four months.

THE INTRODUCTION OF CHOLERA INTO FRANCE.

From the papers laid before the French Academy by M. Grimaud de Caux, it seemed proved beyond all question that the cholera appeared in Marseilles subsequently to the arrival of a vessel with pilgrims from Alexandria. Thus much evidence was brought forward in proof of the contagion theory. Some few weeks ago, however, considerable doubt was thrown upon the theory of contagion by the assertion that cholera was present in Marseilles prior to the date assigned by M. Grimaud. Paragraphs to this effect appeared in some of our daily papers, and gave rise to some distrust of professional theories. It will gratify our readers therefore to know that the supposed cases of cholera have been most satisfactorily explained away by M. Grimaud, who has shown them to be fabrications. Our readers will find M. Grimaud's reply in full in the *Comptes Rendus*, vol. lxiii., No. 16.

THE STRUCTURE OF CONNECTIVE TISSUE.

It has been shown in a memoir by M. E. C. Ordonez, in a late number of *Robin's Journal*, that the arrangement of the elastic element in connective tissue is not exactly as Virchow would have us believe. The French histologist asserts (and our own experience quite agrees with his conclusions) that the elastic elements are not tubular, and hence do not form a system of nutrition canals. His opinion that the connective-tissue corpuscles are transitory we cannot quite concur in. In every specimen of connective tissue the corpuscles in their embryonic or metamorphosed state may be seen. As has been shown by Huxley, the white element of connective tissue is formed by the periplast, and the elastic fibres represent the nuclei plus the portions of periplast immediately connected with them.

TERMINATION OF NERVES IN MUSCLE.

Dr. Moxon, who has been studying the relations of ultimate nerve and muscle fibres in insect larvæ, arrives at the astounding generalisation that, because in the larvæ of the gnat he has seen what he thinks to be the abrupt ending of a nerve, it follows that in all animals with striated muscle the nerves terminate abruptly. We should recommend Dr. Moxon to examine further, and to prepare good specimens and examine them in the fresh condition, and not when "they have been made dropsical by forty-eight hours' confinement."

CAT'S MILK.

M. Commaille, who strongly recommends the employment of cat's milk, states that it has the following composition. One litre contains—

	Grammes.
Butter	33·33
Casein	31·17
Lactalbumen	59·64
Lactoprotein	4·67
Lactose and organic acids ...	49·11
Ash	5·85
	183·77

The cat from which the milk was taken had been fed on flesh exclusively.

A NEW NARCOTIC POISON.

At a late meeting of the Society of Sciences at Göttingen Herr T. Husemann gave a description of a plant which is used in India as a narcotic, and of which the scientific name is *Nerium antidysentericum*. The bark and seeds of the plant are used by the natives in the treatment of diarrhœa, flatulence, fevers, and bilious affections. Herr Husemann's experiments upon the action of the drug were made principally on frogs, toads, pigeons, and rabbits, and they demonstrate that in doses of from 150 to 200 milligrammes the alcoholic extract begins to be poisonous to reptiles, and in doses of 250 to 300 milligrammes it produces death rapidly. Pigeons and rabbits are destroyed by doses of from two to four grammes. These figures relate to cases where the poison was administered by

the hypodermic method. In reptiles the effects show themselves in about a quarter of an hour, and in pigeons and rabbits in from thirty to forty-five minutes. Death takes place in from three to four and a half hours. At first there is paralysis of the muscular system, then suppression of the reflex movements. There is no appreciable alteration in the size of the pupil, or in the movements of the heart. Death takes place by paralysis of the thoracic muscles.

PHYSIOLOGICAL ACTION OF THE PRINCIPLES OF HELLEBORE.

M. Marmé has published the results of his investigations upon the action of *helleborine* and *helleboreine*, two substances prepared from the roots of green and black hellebore, and which he looks upon as glycosides. Helleboreine in small doses acts somewhat like digitaline, and diminishes the pulse; in larger doses, on the contrary, it accelerates it, and produces a brief paralysis of the heart. It increases the secretion of saliva as readily when introduced into the blood as into the mouth. It acts as an irritant to the digestive tube, producing violent vomiting and dysenteric diarrhœa accompanied with severe pain; it causes hyperæmia of the pelvic organs, especially in women. Helleborine acts on the intestines like helleboreine, but differs from it in being slightly narcotic also.

DEVELOPMENT OF BOTHRIOCEPHALUS LATUS.

An important memoir on the life-history of the formidable *Bothriocephalus latus* teaches us a very different creed from that put forward by Herr Küchenmeister. He states that his inquiries prove beyond all question that the embryoes fresh from the egg of this parasite, when introduced directly into the intestine of mammals, do not make their way into the other organs, notwithstanding their possession of the usual circlet of hooks. On the contrary, all the stages of development, from that of scolex to the perfect sexual condition, are undergone in the cavity of the intestine. This statement is one of great importance, and deserves the attention of helminthologists.

COPPER IN THE HUMAN BODY.

It has repeatedly been asserted and denied that copper exists as a normal constituent in the human body. Among those who have detected its presence in the blood and muscles may be mentioned the names of Sarzeau, Vauquelin, Milton, Chevreul, and Wackenroder. Recently, however, Herr Blasius, of Brunswick, has found copper in large proportions in the blood of several mammals. The reason, he observes, why other chemists have failed to detect the metal is that the spleen and liver alone have been examined. The following are some of Herr Blasius' figures:—

Substance.	Weight in grammes.	Proportion of copper per 100.
Blood of ox	1863	0·0007
Liver of ox	300	0·0002
Calf's spleen	227	0·0004
Sheep's liver	474	0·0010
Pig's kidneys	112	0·0009
Pig's spleen	193	0·0009
Spleen of a suicide	101	0·0007
Kidneys	200	0·0007

ABSORPTION OF PHOSPHORUS.

Herren Husemann and Marmé have concluded from their numerous experiments that, contrary to the general supposition, phosphorus in the uncombined condition is absorbed into the system. They state—1. That when oil of phosphorus is introduced by means of a tube into the stomach of dogs or cats, it may be detected in the liver by Mitscherlich's process in two or three hours after its ingestion. 2. Phosphorus may be demonstrated in the liver of herbivorous animals, as well as in those of carnivora. 3. The dose necessary to enable the detection of phosphorus in the liver is extremely small. By using Mitscherlich's process one may detect the phosphorescent light in the liver of rabbits to which so small a dose as a single cubic centimetre of the oil has been given. 4. Sometimes a strong odour of phosphorus is obtained by macerating the liver in sulphuric acid. 5. Phosphorus may also be detected in the heart and in its contents, especially when the oil has been administered in large doses.

FUNCTIONS OF THE STOMATA OF LEAVES.

Botanical physiologists of the old school will be surprised to hear that M. Duchartre, one of the most distinguished botanists of France, declares that the quantity of carbonic acid exhaled by plants has not any relation to the total surface of the stomata or "breathing holes." This opinion is contrary to that expressed in most of our modern text-books.

DEVELOPMENT OF THE BUCCAL CAVITY.

According to Herr Török's inquiries, the buccal cavity is developed from a thickened expansion of the same layer of embryonic cells from which the cerebral nervous system, the olfactory organ, the retina, and the vesicles of the labyrinth take their origin. The thickening takes place just above each of the two olfactory organs. As the sinus increases in depth, it ceases to be in a right line with the visceral cavity. The other details of Herr Török's memoir are too technical for abstract in these pages. The paper was originally read before the Society of Sciences of Göttingen.

OBSERVATIONS OF THE EGG OF THE HEN.

Herr Stricker has published an essay with the above title. He says one finds in the ovary of a young hen utricles like those of the mammalian ovary. It is possible to isolate a membrane which is usually enclosed between the epithelium with follicles and the yelk, even when the eggs are quite fresh. Hence, says Herr Stricker, it may be concluded that the *peripheric cells are nothing less than a follicular epithelium*. The elements of the vitellus are neither of a conglomerate character, as Gegenbaur asserts, nor of cellule. They are the products of *the secretion of the follicular epithelium*, equivalent to the mucous globules found in the intestinal canal. That which is styled the *vitellus of formation* (Bildungs-Dotter) is, in the strongest sense of the word, an independent cellular body. In future, therefore, physiologists should substitute for the expression *vitellus of formation* the simpler and more exact expression, *germ*.

Correspondence.

"Audi alteram partem."

CLITORIDECTOMY.

To the Editor of THE LANCET.

SIR,—The inaccuracies, to use a mild expression, of Mr. Isaac B. Brown's statements having been so incontestably proved, and all participation in Mr. Brown's theories and practices having been so strongly disclaimed, little now remains for me but to narrate the circumstances under which my private note was penned, and to which Mr. Brown has thought fit to give publicity in the last number of your journal.

The note which he says I wrote to him on the 24th of May, 1865, I may have written; but I have so total a want of any recollection of having done so, that I can look upon it as the letter of a total stranger; and doing so, I, and any of your readers, can and must see at a glance that it is the letter of a man who, having received the apology alluded to in the first sentence, writes with the overstrained courtesy which any one naturally does on accepting an apology. Mr. Brown may not understand this; but to your readers it needs no comment.

Mr. Isaac B. Brown appears to urge this note upon the attention of your readers as confirmatory of the reckless assertions contained in his communication of the 22nd of last December: first, and in his own words, "that in a case brought to me by an eminent physician in London, Dr. West had given his opinion to the effect that the case was a suitable one for my operation . . . that the physician was Dr. Greenhalgh;" and, secondly, that I had recommended the excision of the clitoris for self-abuse. The only allusion in that note to Dr. West is, that "I think" the patient "has been under his care." There is not one word referring to clitoridectomy, as far as that physician is concerned. But to the facts of the case. The lady to whom the note refers had suffered between seven and eight years from pruritus, for which she had been treated by more than one eminent practitioner. Finding little and no permanent benefit from the numerous remedies prescribed, she applied to me for advice, and was under my

care for many months, during which time she was once (June 13th, 1864) seen by Dr. A. Farre in consultation with me. Shortly after this interview she called upon me in the greatest distress, to inquire if anything further could be done, as all the means hitherto recommended had only given her temporary relief, and had failed to cure her distressing affection. I then informed her that Mr. Isaac B. Brown had advocated and practised the removal of the irritable parts in such cases, and, as he had affirmed, with the best results, but of the effects of which operation I had no personal experience. From October, 1864, to the following May, I saw nothing of my patient, when she called at my house and expressed her *firm determination* to have the part cut out, at the same time requesting me to arrange a consultation with Mr. Brown. At that consultation Mr. Brown not only strongly advised the operation, but promised it would effect a cure. On being appealed to by the patient for my opinion, I again repeated, and in the presence of Mr. Brown, that I could not express an opinion, as I had no experience of its effects. Three days after this interview clitoridectomy was performed by Mr. Brown, and proved a lamentable failure, the poor sufferer herself stating, in a note written to me January 6th, 1866, that "the irritation had returned with its wonted force all over, up the front and back passage, and that her general health was not so good," which was probably due to the large loss of blood she sustained at the time of the operation. After this truthful detail of facts, I still maintain that it cannot be said, by any impartial judge, that I recommended the removal of the clitoris for self-abuse. Thus Mr. Isaac B. Brown has fallen into the very trap he set for another. The profession, I may here observe in passing, will do well to take note that Mr. Isaac B. Brown is in the habit of pigeonholing letters he receives, to be used as occasion may require against the writer.

It is not my intention to follow Mr. Isaac B. Brown, step by step, through the rest of his violent diatribe against me. Mr. Brown must be blind indeed when he persists in dwelling so forcibly on my visits to the "Home," as he only obtrudes on the public my peculiar competency to form the opinion I have felt it my duty to record on its merits. But let that pass. It may be very convenient for Mr. Isaac B. Brown to ride off from the general issues of the question to particular details about myself, and thus avoid facing the censures of an indignant profession, and the verdict of an outraged public. I am bold to assert, however, that he will one day find that neither the public nor the profession will be deluded by such arts as these into a forgetfulness of the real ground of the debate. If the operation with which Mr. Isaac B. Brown is so anxious to associate his name were capable of working the good which its champion so assiduously parades — if insanity, epilepsy, catalepsy, and hysteria, in females, and other evils to which humanity is heir, could be made to yield to the knife he wields with a dexterity I am forward to admit—Mr. Brown would have no warmer supporter than myself. My contention, however, is, that Mr. Isaac B. Brown's practices are founded upon erroneous views, and in no case that I am aware of have they effected a cure; in some they have produced the very mischief they pretend to remove or avert. My contention, also, is, that women have *unwittingly* been made the victims of operations of the nature of which they were totally ignorant; and that the profession at large are bound to repudiate, as strongly as they can, practices so fatal to their good name and fame.

Mr. Isaac B. Brown may affect to doubt that I have stated my true reason for ceasing to visit the "Home." Perhaps he may be able to explain the numerous resignations of consulting physicians and other members of the staff. The recent resignation of Mr. Chambers, noticed in your last issue in the following terms—"We congratulate that gentleman on the laudable step he has taken, in which we feel sure he will have the support of all right-thinking men—and women," reminds me that Drs. Handfield Jones, Priestley, J. Hall Davis, and Messrs. Skey and Nunn, all honourable men and true, were once on the consulting staff of the Surgical Home. Why are they not there now?—I am, Sir, your obedient servant,

Grosvenor-street, Jan. 7th, 1867. ROBERT GREENHALGH.

*** This personal controversy must here terminate. We strongly urge upon the Council of the Obstetrical Society that a committee of three or more should be appointed to investigate the subject of clitoridectomy, which involves so many questions of professional ethics. The matter is one which the Obstetrical Society is most competent to deal with, and we trust that all parties will abide by its decision.—ED. L.

THE "PALL MALL GAZETTE" AND DR. HUNTER.

To the Editor of THE LANCET.

SIR,—The spirited conduct of the proprietors of the *Pall Mall Gazette* in protecting the interests of the public and the honour of the profession in the article upon Dr. Hunter, and in the defence of the case Hunter *v.* Sharpe, has already been the subject of favourable comment in your pages.

Several members of the profession and a few other gentlemen think it desirable to show some mark of their appreciation of this conduct, and propose to join in a limited subscription, the disposal of which shall be hereafter determined. We beg to request your assistance in making known their intentions, and in furthering the object they have in view.

G. D. Pollock, Esq., 27, Grosvenor-street, and T. H. Hills, Esq., 45, Queen Anne-street, have consented to act as treasurers; and subscriptions may also be paid to the Argyll-street branch of the Union Bank.

We are, Sir, your obedient servants,

G. W. CALLENDER,
47, Grosvenor-street.
J. C. PARKINSON,
Arts Club, Hanover-square.

January 7th, 1867.

First List of Subscribers.

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C. De Morgan, Esq. ...	2	2	0	Sir T. Watson, Bart. ...	2	2	0

LITHOTOMY AND LITHOTRITY.

To the Editor of THE LANCET.

SIR,—I send you the following facts for publication. The calculation is made from the "Statistical Tables of Patients treated in Guy's Hospital." They are arranged by the superintendent, and printed by the authority of the governors of that hospital. The total number includes those patients only upon whom either the crushing operation or the cutting was performed.

During the twelve years, 1854 to 1866 inclusive, two hundred and eleven patients underwent one or other of the operations above-mentioned. This gives very nearly an annual average of eighteen cases.

I remain, Sir, yours faithfully,

Green-street, Grosvenor-square, Jan. 8th, 1867. JOHN BIRKETT.

THE ARMY AND NAVY MEDICAL WARRANT.

To the Editor of THE LANCET.

SIR,—The new Warrant for the Officers of the Army and Navy Medical Departments was promised to be published on the 1st of January, and the increase of pay to take effect from the 1st of April.

We are now some time past the 1st of January and no Warrant has appeared as yet, and the 1st of April seems rather an *ominous* day on which to found any hope of the increase of pay.

Next month the examination for candidates takes place, and if the authorities can get a goodly number of "crammed" applicants for commissions we may give up hope of seeing the Warrant in 1867.—I am, Sir, your obedient servant,

Jan. 8, 1867. TOO OFTEN HOAXED.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having been elected Fellows at previous meetings of the Council, were admitted as such on the 10th inst.:—

Amyot, Thomas Edward, Diss, Norfolk; diploma of membership dated April 12th, 1839.
Dyke, Thomas Jones, Merthyr Tydfil; diploma dated Nov. 2nd, 1838.

THE Denbighshire Infirmary and General Dispensary Ball produced upwards of £80.

A SERIES of "Sermons on Health" are now being preached at Paisley, under the auspices of the Ladies' Sanitary Association.

AN imperial decree has been issued prohibiting the importation of pork into Russia and Poland, on account of the frequent occurrence of trichina disease in Germany.

A VERDICT, with £300 damages, has been recovered in an action in the Court of Session in Scotland, for colouring whisky, intended for the African market, with logwood, instead of burnt sugar, as agreed.

A COLLECTION which was made at Renshaw-street Chapel, Liverpool, on Sunday last, after a sermon by the Rev. J. H. Thom, on behalf of the hospitals and charities of the town, realised £244 9s.

DRAINAGE OF HORNCASTLE.—The recently-formed Local Board of Horncastle have resolved to proceed, at once, with drainage works for the town, and have instructed Mr. Lawson to prepare the necessary plans.—*Builder.*

A FEW days ago Edward Wade, Esq., surgeon, Cross, Somerset, was presented, by 140 of his patients, with a handsome silver tea service, together with a carriage and harness, as a mark of their appreciation of his services among them for upwards of 30 years.

FROM the report of the treasurer of the Glasgow Royal Infirmary, which was read at the annual general meeting on the 7th inst., it appears that legacies to the amount of £2870 16s. 6d., and donations to the amount of £1679 5s. were received during the past year.

THE Guardians of the Macroom Union, County Cork, at their meeting on Saturday last, the 5th inst., increased the salaries of Dr. O'Keefe, medical officer of the Connavee district, and Dr. Barrett, of the Inchageela district, from £90 to £100 per annum each.

SANITARY RESPONSIBILITY OF CORPORATIONS.—Mr. Brumback, of Louisville (U.S.), who lost his wife and daughter by cholera, has sued his city corporation for damages in the sum of 25,000 dollars, alleging that if the streets in his vicinity had been properly graded no deaths would have occurred.

QUEEN CHARLOTTE'S HOSPITAL.—After a connexion with this institution of ten years, Mr. Charles Hawkins has resigned his office of surgeon, in order to make way for a younger man. Mr. Hawkins superintended the building of the new hospital, and has rendered other important extra-professional services to the hospital.

THE festive season of Christmas was celebrated at the Staffordshire Lunatic Asylum by a series of entertainments, consisting of dissolving views, a vocal and instrumental concert, a pantomime and a ball. The manager and all the attendants, from Dr. Bower downwards, took part in the proceedings, which gave great delight to the afflicted patients.

WE are most happy to state that Sir James Young Simpson is so far restored to his usual health as to have recommenced his lectures. On Monday last Sir James was enthusiastically cheered by the students on entering the class-room. He then delivered the first of a course of lectures on Anæsthesia.

THE LATE REV. JOHN SPENCE bequeathed, among other legacies, £1000 to the Dundee Royal Infirmary, £1000 to the Perth Infirmary, and the residue of his estate (about £12,000 according to his estimate) for the purpose of providing bursaries of not less than £50 per annum each, to promote the education of students at the Universities of St. Andrews and Edinburgh.

A MEDICAL ATHLETE.—Mr. Hemmings, a medical student, performed an extraordinary pedestrian feat on Monday last. He undertook for a wager of £10 to run four times round outside the railings of St. Clement's Church, in the Strand, during the time the church clock struck the hour of twelve and chimed the usual "Lass of Gowrie." He commenced his task at the first stroke of the bell, and at an increasing speed had accomplished the feat before the chimes had concluded. The actual distance traversed was over one-third of a mile. Three minutes were occupied in the striking and completion of the subsequent chimes, and the gallant medico finished the distance, with twenty seconds to spare.

MR. JAMES BARR, L.R.C.S. Edin., of Coleraine, County Londonderry, received very severe and serious injuries a few days since. He was riding a spirited young horse, when the animal shied at something on the road, became unmanageable, and fell, bringing Mr. Barr, who was unable to get his feet out of the stirrups, to the ground. He was seriously injured about the back, and received a kick from the prostrate horse.

A JEW at Glasgow has been fined five shillings for neglecting to get his child vaccinated. He said it was contrary to his religion and his conscience to allow such an operation to be performed upon his child; but the sheriff who heard the case said that the Act of Parliament contained no exception, and he had no alternative but to convict.

DR. LIVINGSTONE.—Intelligence from Zanzibar gives unpleasant accounts of Dr. Livingstone's expedition. Four or five of the natives of India who accompanied him have returned from the interior emaciated with fever, and they report that at Mataka, a populous town two days' journey from Lake Nyassa, the expedition had broken down, all the animals of burthen taken from India having died.

PROPOSED INFIRMARY FOR WIGAN COLLIERY DISTRICT.—It has been resolved at an influential meeting of the inhabitants of Wigan and its neighbourhood that an effort be made to raise £30,000 for the erection of a suitable building, and as a part of the endowment fund, for an infirmary, which should contain some fifty or sixty beds, and the working expenses of which would be about £3000 annually.

THE CHOLERA IN SCOTLAND.—After an entire cessation for several weeks throughout the west of Scotland, cholera has again broken out in Port Glasgow, a small town on the Clyde, about two miles east of Greenock. In one family, that of a labourer named Gillon, inhabiting a miserable hovel, six deaths have occurred within the last few days, the only survivor being one of the children. The undertaker who was employed to bury these sufferers was taken ill, and died within seven hours. Several other fatal cases have occurred, and much excitement prevails in the town. Every effort is being made to arrest the disease; a drill hall having on the spur of the moment been converted into an hospital.

DEATH OF A CENTENARIAN PAUPER.—On New Year's Day—her own birthday—there died in Shrewsbury Workhouse Mary Galligall, aged 102 years. Mrs. Galligall, who knew herself best, and was better known as "Granny," was, up to the very hour of her death, a singularly shrewd and lively old lady, and, propped up in her comfortable bed, held her regular receptions, and was wont to crack jokes and bandy repartees with her visitors, in which encounters she did not always come off second best. Although her body was wasted away till her arm was not thicker than a man's forefinger, her animal spirits never seemed to flag, and her senses and intellect were in a remarkable state of preservation. By the kindness of Dr. Keate, the house-surgeon, she had many privileges not usually accorded to paupers, among which were her lunch, her glass of gin, and her pipe, which were duly provided at eleven o'clock each morning. On New Year's Day she finished her gin and smoked her pipe as usual, and then quietly lay back and died, without a struggle or sign of pain.

A TUMBLER REMOVED FROM WITHIN THE RECTUM.—M. Laroyenne, Surgeon to the Hôtel Dieu, at Lyons, has published in the *Gazette Médicale de Lyon* of the 1st inst. the case of a doorkeeper, formerly a soldier, who applied to the hospital complaining of diarrhœa and difficulty of passing urine. A catheter was easily passed, and nothing wrong was detected about the urethra and bladder. The anal orifice was, however, found flaccid and open; but the patient expressing himself re-

lieved, he was lost sight of for about one month. At the expiration of that time he presented himself again, and stated that the diarrhœa had returned, and that he was getting very weak. On examining the rectum a foreign body was felt within it, and the patient confessed that it was a tumbler, which he had introduced, as he alleged, to relieve the urinary uneasiness. After several vain attempts M. Laroyenne succeeded in removing it by means of small midwifery forceps lined with canvas. The diameter of the tumbler was two and a half inches, and the height three inches. The patient's condition improved a little, but the diarrhœa persisted, and in a month he died. On a post-mortem examination the mucous membrane of the rectum was found thickened, and here and there ulcerated; the cellular tissue around the bowel was hard, and strongly adherent to its coats; and a few small abscesses were observed in the vicinity.

AT the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 8th inst., Sir E. Hilditch, Inspector-General, in the chair, the sum of £60 was distributed among the various claimants.

DURING the past year 101 cases of scurvy have been admitted into the *Dreadnought* hospital ship, five only of which came from foreign vessels.

METHYLATED SPIRIT.—An important law passed in the last Session of Parliament, for preventing the unrestricted use of methylated spirit in the preparation of medicines, came into full operation on the 1st inst. The object of this law is to prevent the use of methylated spirit in the production of any spirituous compound or mixture which could be used either as a beverage or, internally, as a medicine; and so particular have the legislators been on this subject that druggists will not be allowed to make medicines for *internal* administration to even *animals*, under a penalty of one hundred pounds and forfeiture of the articles, together with the vessels or packages containing the same. Medicines for external application, however, may be made with methylated spirit, and it may be used for burning in lamps.

AT the last meeting of the Academy of Medicine M. Tardieu inaugurated the year's business and his own presidency by the delivery of a very able speech. He did not confine himself, as has been the custom with his predecessors, to thanking his colleagues for the honour which they had conferred upon him, but went into a veritable *profession de foi*, in which he announced his own opinions with regard to the questions which are at present stirring the attention of the Faculty, and the medical community of France. The manner in which he spoke of the debate which is now being carried on at the Academy concerning the very important and much vexed question of wet-nursing, shows that he is determined to direct the discussion in such a way that it be continued to its full extent, and be followed by some measures which may put a stop to this crying evil.

HARVEIAN SOCIETY. — At the annual meeting of this Society on the 3rd inst., the following gentlemen were elected officers for the ensuing year:—President: Dr. Pollock.—Vice-Presidents: Dr. Ballard, Dr. W. F. Cleveland, Mr. Ernest Hart, and Mr. J. B. Walker.—Treasurer: Dr. Fuller.—Hon. Secretaries: Mr. Curgenven and Dr. Dryadale.—Council: Mr. De Méric, Mr. J. Eardley, Mr. John Evans, Mr. J. Gayleard, Mr. R. S. Jeffs, Dr. J. Stewart Lamb, Mr. J. R. Lane, Mr. J. Z. Laurence, Mr. H. W. Lobb, Mr. Edwin Lowe, Dr. Duncan Menzies, and Mr. J. Rushforth.

GLASGOW LYING-IN HOSPITAL.—At a meeting of the directors of this hospital, held on the 3rd inst., the following medical officers were appointed:—Consulting Physician: Dr. Andrew Anderson. Consulting Surgeon: Dr. George Buchanan. Physicians-Accoucheurs: Drs. J. G. Wilson and R. D. Tannahill. Assistant Physicians and Dispensary Physicians: Drs. Donald Dewar and George Yeaman.

ITALIAN LIBERALITY.—A change of much importance to the medical profession has just been effected in the statutes of the kingdom of Italy. Formerly medical men could not be bequeathed any property by their patients. This has lately been considered as a slur upon our noble calling, and the law has been repealed.

FACULTY OF MEDICINE, PARIS. — Three professorial chairs remain to be filled at this Faculty. The one of surgery seems destined to M. Broca; of the other two (both of medical pathology), one will probably be given to M. Axenfield; the chances for the other seem divided amongst a great number of candidates.

MEDICAL TRIAL.

CENTRAL CRIMINAL COURT, JAN. 9TH.

OFFENCE AGAINST THE LUNACY LAWS.

MR. GEORGE NAYLER, surgeon, living at George-street, Hanover-square, was indicted for having unlawfully received and boarded, at a certain house in Hanwell, not being an hospital registered according to the Act of Parliament, a certain patient as a lunatic, without a proper order of medical certificate as required by the Act.

The defendant pleaded guilty.

Mr. Metcalfe (with whom was Mr. Besley), instructed by the Commissioners in Lunacy, informed the Court that the defendant had transgressed the law by receiving into his house at Hanwell the son of a clergyman, at the charge of £130 per year without the proper order.

Mr. Poland addressed the Common Serjeant for the defendant, and called Dr. Jenner, physician in ordinary to the Queen; Mr. Pollock, surgeon to his Royal Highness the Prince of Wales; and Mr. Holmes, surgeon, who gave the defendant the highest possible character both for his professional ability and as a gentleman. They severally expressed their belief that he was a person who was incapable of a dishonourable action.

The Common Serjeant said that it was a very proper matter for the Commissioners to take up, and he considered that in thus bringing it forward they had done that which was sufficient. It would be his pleasing duty to allow the case to stop here upon the defendant entering into his recognisance for £100. He was sure that there would be no fresh cause of complaint against the defendant.

MEDICAL VACANCIES.

Ely Dispensary—Surgeon in Ordinary, vice Dr. Davies, resigned.
Stamford, Rutland, and General Infirmary—House-Surgeon, Apothecary, and Secretary.

MEDICAL APPOINTMENTS.

J. ALLISON, L.K.Q.C.P.I., M.R.C.S., has been appointed one of the Honorary Visiting Medical Officers to the Barrow-in-Furness Hospital and Dispensary.

W. ARMISTEAD, M.B., C.M., has been appointed House-Surgeon to the Barrow-in-Furness Hospital and Dispensary.

T. BAILEY, M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Western District and the Workhouse of the Godstone Union, vice R. G. Watts, M.D., resigned.

A. BEARDSLEY, M.R.C.S., L.S.A., has been appointed Honorary Consulting Surgeon to the Barrow-in-Furness Hospital and Dispensary.

J. BENSON, L.R.C.P.Ed., Medical Officer for the Barton District of the Luton Union, Bedfordshire, has been appointed Public Vaccinator, vice P. Benson, M.R.C.S.E., resigned.

J. A. BRIGHT, M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for District No. 3 of the Wells Union, Somersetshire, vice F. Lefevre Malton, M.R.C.S.E., deceased.

Mr. A. H. BUCK has been appointed House-Surgeon to the Charing-cross Hospital, vice Mr. Powell.

E. B. HAMMOND, M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Teignmouth or No. 11 District of the Newton Abbot Union, Devonshire, vice R. B. Sullock, M.R.C.S.E., resigned.

W. POWELL, L.S.A., has been appointed Resident Medical Officer to Charing-cross Hospital, vice Mr. Hayden, resigned.

W. SINCLAIR, M.D., L.R.C.P. & S. Ed., has been appointed one of the Honorary Visiting Medical Officers to the Barrow-in-Furness Hospital and Dispensary.

P. W. STARK, M.D., L.R.C.P. & S. Ed., has been appointed one of the Honorary Visiting Medical Officers to the Barrow-in-Furness Hospital and Dispensary.

T. W. TREND, L.K.Q.C.P.I., M.R.C.S.E., has been appointed Admiralty Surgeon and Agent at Southampton, vice J. King Sampson, F.R.C.S.E., resigned.

Births, Marriages, and Deaths.

BIRTHS.

On the 18th ult., at Fulford, near York, the wife of Lancelot Armstrong, M.D., 13th Hussars, of a son.
On the 26th ult., at Rye-lane, Peckham, the wife of J. Blomfield, M.D., of a son.
On the 29th ult., at Little Huthwaite, Wortley, near Sheffield, the wife of A. M. Watson, M.D., prematurely of a son, still-born.
On the 29th ult., at Northumberland-avenue, Kingstown, Ireland, the wife of Dr. R. Price, of a daughter.
On the 29th ult., at Rugeley, the wife of F. J. Gray, L.S.A., of a daughter.

On the 30th ult., at Stockton-on-Tees, the wife of William H. Oliver, L.R.C.P.Ed., of a son.
On the 30th ult., at Mount-street, Grosvenor-square, the wife of Dr. H. G. Houghton, of a daughter.
On the 30th ult., at Camborne, the wife of P. Vincent, M.R.C.S. Eng., of a daughter.
On the 31st ult., at Tetford, Lincolnshire, the wife of John Hadden, M.D., L.R.C.S.I., of a daughter.
On the 2nd inst., at Old Friars, Richmond-green, Surrey, the wife of Fredk. Chapman, M.R.C.S. Eng., of a daughter.

MARRIAGES.

On the 27th ult., at St. Mary's Church, Hulme, Manchester, F. R. Fairbank, M.D., of Bloomsbury, Manchester, to Sarah Ellen, second daughter of the late James Meadows, Esq., of Green Heys, Manchester.
On the 1st inst., at East Budleigh, Devon, William Huxtable, M.R.C.S. Eng., of Budleigh Salterton, Devon, to Eliza, widow of the late S. Walker, Esq.
On the 4th inst., at South Tedworth, W. Johnson, M.D., to Mary, daughter of the Rev. R. Young.

DEATHS.

On the 10th ult., T. Haslehust, F.R.C.S.E., of Claverley, near Bridgenorth, Shropshire, aged 66.
On the 29th ult., John Desmond, M.D., of Nelson-place, Youghal, Co. Cork, aged 79.
On the 28th ult., P. M. Roberts, L.S.A., House-Surgeon and Secretary of the Denbighshire Infirmary and General Dispensary, Denbigh.
On the 2nd inst., at Campbeltown, R. Harvey, Surgeon, aged 81.
On the 4th inst., at Alford, Lincolnshire, Sophia Uvedale, the youngest child (by his first marriage) of Dr. R. Uvedale West, aged 23.
On the 6th inst., R. Cottam, M.R.C.S.E., of Leeds, aged 38.
On the 6th inst., C. Vise, M.R.C.S.E., of Spalding, Lincolnshire, aged 64.
On the 6th inst., at the Rookery, Great Marlow, Benj. Atkinson, M.R.C.S., and J.P. for the County of Bucks, aged 64. Beloved and deeply regretted by all.
On the 6th inst., at Great Horkesley-park, near Colchester, Essex, Edward Tallent, M.R.C.S., formerly of Amersham, Bucks, aged 66.
On the 7th inst., James Cuthbertson, M.D., of Booterstown-avenue, Dublin, aged 68.

QUARTERLY NAVAL OBITUARY.

James W. Arnott, M.R.C.S. Eng.; Assistant-Surgeon, 1862.
Ambrose Blacklock; Surgeon, 1807.
John M. Campbell, M.B.; Acting Assistant-Surgeon, 1866.
Joseph R. L. Duff; Surgeon, 1824.
James Holt, L.R.C.S. Edin.; Surgeon, 1860.
William Houghton; Surgeon, 1840.
Andrew Leslie, L.R.C.S. Edin.; Surgeon, 1798.
Charles Quesade; Surgeon, 1807.
Robert P. R. Sparrow, L.R.C.P. Edin.; Assistant-Surgeon, 1845.

BOOKS ETC. RECEIVED.

Dr. Greenhow on Addison's Disease.
Dr. G. B. Wood's Practice of Medicine. Two Vols. (Philadelphia.)
Dr. Thorburn on Tedious Labour.
Dr. Copland on Consumption and Bronchitis.
Dr. Althaus on Epilepsy, Hysteria, &c.
Dr. Chambers on Diseases of the Digestive Organs.
Dr. Peacock on Malformations of the Human Heart.
Dr. Headland on the Action of Medicines in the System.
Dr. Hebra on Diseases of the Skin.
Watts's Dictionary of Chemistry.
St. George's Hospital Reports. Vol. I.
Mr. Smith on Pneumonia in Young Children.
Mr. A. Baker on Pyæmia.
&c. &c. &c.

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To Correspondents.

DANGEROUS TOYS.

EVERYTHING now-a-days must have a dash of science about it, even the playthings of our children. The combustibility of certain metals has been taken advantage of in the manufacture of amusing toys, and the preparation of the material for experiments in the parlour and the nursery. Chemical forces are very powerful; they cannot be trifled with nor be brought into action without corresponding effect. A great number of the toys are explosive; and whilst they delight, no doubt, by the brilliancy of their behaviour, and in some degree tend to excite an interest for science, they contain within themselves, and when burnt give rise to, compounds of a very dangerous nature. The fumes from "Pharaoh's Serpents" contain mercurial vapour sufficient to salivate and injure those who breathe it. Unfortunately, too, being covered by tinfoil, they resemble bits of chocolate, and are apt to be swallowed at the risk of life. The newest sensation toy is named "Devil's Tears," and is composed of a little oval cotton capsule, open at one end, and covered by a layer of varnish, resembling closely red sweetmeats or the berries of the hawthorn; indeed out of five children who were asked, on specimens being shown them, what they were, three declared they were sweets, and two berries. These "Devil's Tears" contain in the centre a little piece of the metal potassium, which inflames when brought in contact with water. There are several imitations made on the same principle, called "Juno's Tears," "Witch's Tears," and so on, all of which, when thrown into water, burn and explode, scattering little red-hot fragments in all directions, so that children who play with them run great danger of burns and other injury. Should one of these balls be swallowed—and they are and will be plentifully distributed, no doubt, at this season amongst our little ones,—the consequence would be almost assuredly fatal. We utterly condemn their use, and hope that the public will be made fully acquainted with their nature.

Dr. Rhein Morris.—We note Dr. Morris's intention. If he refers to our impression of January 6th, 1866, he will see that he has been anticipated in his design of writing on Shock to the Nervous System caused by Railway and other Accidents, and in his wish to receive accounts of cases. The subject requires to be most carefully treated to avoid the risk of doing that which Dr. Morris disapproves—giving an importance to railway accidents not based on true pathological conditions.

THE valuable paper of *Dr. Sidney Ringer* "On the Management of Young Children" shall appear in an early impression.

ON THE ADMIXTURE OF VACCINE LYMPH WITH GLYCERINE.

To the Editor of THE LANCET.

SIR,—On looking over some old numbers of the *Berliner Klinische Wochenschrift* the other day, I came upon an article by Dr. Müller, of the Berlin Vaccine Institute, with the above title, and which I think deserves the attention of the medical profession.

Dr. Müller begins by saying that the only true way to combat epidemics of small-pox is the constant vaccination and revaccination of those individuals liable to be infected; but that, partly from the negligence of physicians, partly from the refusal or disinclination of parents to allow their children, when vaccinated, to be used for the supply of lymph, no vaccine institute can, during epidemics, give sufficient lymph for the revaccination of all. Consequently the possession of a means by which this want can be removed, and every physician can obtain and keep a sufficient supply, is of inestimable value. This means he professes to have discovered in the dilution of the lymph with glycerine. In the first experiments he made with it, the results were above all expectation. Not only were the vesicles produced as well marked in their course and appearance and the amount of lymph they contained, but the general symptoms were not inferior to those produced by pure lymph.

Dr. Müller's method of proceeding is as follows:—Open some of the ordinary vesicles on the eighth day, and remove the lymph by a small pencil-brush; dip this into a solution of from ten to twenty drops of equal parts of pure glycerine and distilled water, and mix the whole by means of the pencil-brush in the most careful manner. With this we may either vaccinate at once, or take it up in the ordinary glass-tubes; and he notices, too, that it has the advantage over ordinary lymph of filling the tubes much more easily and completely.

How far the dilution can be carried, and yet success ensured, he is not quite sure; but if we only dilute the lymph ten times, success is certain. He points out, too, that as we only require few children if we adopt this means of increasing our supply, we may be much more careful in our selection of them, and thus lessen the possible danger of the transfer of dyscrasia.

Finally, cow-pox lymph itself may thus be greatly increased in quantity without any diminution of its efficacy; and as he maintains that it keeps better than ordinary lymph (although he nowhere offers any proof of this), we may send it to the most distant countries without any danger of its spoiling on the way.

Now, Sir, so far good. But I cannot help sufficiently admiring the cool way in which Dr. Müller propounds this plan as an original idea of his own. Now I happen to know very well that the method just described was communicated to him by an English gentleman, Dr. Charles, of Calcutta, Inspector-General of Vaccination for India; for I was present at the Vaccine Institute in Berlin last winter, when Dr. Charles first mentioned it to him. Whether the idea originated with Dr. Charles, I cannot say; but I understood from him that he had used it to some extent in India.

Our friends the Prussians have been doing a good deal in the way of appropriation lately. As long as it concerns only "brother Germans," we need not care much; but when it happens to be British ideas they appropriate without a word of acknowledgment, it comes to be a much more serious matter, and as such I, for one, most strongly protest against it. Probably in a very short time we would have had this translated as a new German idea.

I am, Sir, your obedient servant,

L. ATTHILL, M.B.

New Ormond-street, Queen-square, December, 1866.

COLD AND DARKNESS.

AMONGST other inconveniences produced by the severe cold of last week was, in many places, a sudden extinction of gas. This, like many of our sufferings, arises from easily understood and very preventable causes; but the fine conservative spirit of mankind will put up with inconvenience and distress rather than suffer alterations to be made. Thus because London is in a zone called and presumed to be temperate, we are utterly unprepared either for heat or cold. In our houses the Bengalee suffers in the summer, the Russian shivers in the winter. In the latter season locomotion in our streets and on our iron highways is equally impeded. The boasted science of our age is put to shame by a few hours of snow-fall. What will become of us if our material light shall likewise be extinguished? We had a sufficient taste of the inconveniences of the present arrangements in the wholesale extinction of gas last Thursday week. Many and ingenious are the grave speculations we have heard about the effect which intense cold is likely to exert upon carburetted hydrogen. The truth, however, is that any imaginable degree of cold can hardly affect the incandescent quality of our gas, but is extremely likely to disarrange our machinery. The water of a wet-meter is sure to become frozen in cold weather if the instrument be kept in areas or in draughty passages. Thus for such darkness the remedy is so simple that it probably will not be adopted.

MEDICAL EVIDENCE.

To the Editor of THE LANCET.

SIR,—A medical witness summoned to give evidence in a court of justice on the facts of a case should not be required to give an opinion as to the legal significance of such facts. The witness of fact should confine himself to fact, and the exposition of fact should be imposed upon another.

The following reasons, amongst others, show that the present usage is capable of improvement:—

1. A medical man, however young and inexperienced, may at any time, without chance of escape, find himself in the most prominent position as witness in a most complicated case. He may be able to describe fully and accurately what he has observed; but may be utterly unable when under the raking fire of a cross-examination to defend his opinion as to the legal bearings of his observed facts. He may know that a wound is three inches long and an inch deep, passing in a certain direction; but when he states that in his opinion the wound was or was not self-inflicted, he will find himself suddenly grasping for breath in an atmosphere of negations.

2. When a witness fails in stating his theory clearly, or in defending it promptly and judiciously, the court is very ready to assume that his facts may be as doubtful as his opinions.

3. But let us suppose that the medical witness is skilful both as an observer and reasoner, practised in public speaking, cool and astute, detecting the hook in every bait, brightening as he warms in the intellectual contest until his antagonist retires utterly discomfited. In this case the purposes of justice are as much endangered as in the former example. The clever witness is looked upon as a special pleader, and his reasonings will be received with suspicion by a jury. If on the side for the prosecution, he will be accused of sacrificing the prisoner; if on the side of defence, he will equally be accused of exculpating the prisoner by a perverse and subtile ingenuity. And his too successful readiness in theory will tend to lessen the faith of the court in the achromatic character of his facts.

4. If the witness to facts had merely to state facts, he would escape the imputation of adapting his facts, consciously or unconsciously, to the theory of the side on which he is summoned. If the expounder of facts had merely to deal with facts observed and stated by another, he would escape the imputation of having formed an opinion before his opinion had been asked. The exponent of the legal bearings of the case would then be as free as the judge himself to form his opinion from what he has heard.

5. The separation of the duty of narrating from the duty of reasoning upon facts would, as in all cases of division of labour, lead to the more skilful performance of both duties. As things now are, when a medical man finds himself in connexion with a case which may issue in a legal investigation, his first object is to prepare himself to give an opinion as to the legal bearings of the case. This leads to hasty generalisation. Attention is specially directed to those facts which lie within the focus of our hypothesis, and other facts equally important are obscured, distorted, or unseen. If a witness had merely to defend his own veracity as a truthful observer, his only object would be to observe fully. The object of the cross-examiner would not be to puzzle the witness on matters of opinion, but to show, if possible, that some important fact had not been observed. If the witness break down, it will be because he is an incompetent observer. Witnesses of fact, knowing this, would prepare for it, and medical observation would soon become far more exact than at present.

6. The change advocated may be accomplished without any violent dislocation of existing law. The change would, in fact, be more a change of custom than of written enactment. For at present no man is bound to express an opinion in court unless he chooses. But yet, so long as it is customary for medical witnesses to be requested to give opinions, the present custom will continue. If judges agree to disallow expressions of opinion by the witness of fact, the entire system would without any further legislation fall to the ground.

7. If the present custom were altered, then we should require a distinct class of witnesses, or, more properly, of advisers or expositors, whose sole duty would be to explain the legal significancy of medical facts. No doubt at first and during the period of transition, men of eminence known to entertain opinions in accordance with the hypothesis sought to be established would be employed, and some of the evils of the present system would therefore remain; but in process of time the scientific reasoners would establish themselves in the confidence of the judges, and such men would be summoned, not by either side, but by the court itself to assist in its deliberations. Such men would have the position of medical judges, laying down the medical law, and eventually some of the more eminent of them might occupy a place on the bench for the performance of certain specified duties, holding appointment directly from the Crown itself. To smooth the way for the reception of an idea so novel into the minds of those who dislike changes, let us suppose that the Crown shall appoint a certain number of coroners from amongst those who distinguish themselves as medical advisers to the courts, such coroners, already judges in their own courts, to have judicial powers in medical matters in the higher courts.

Yours obediently,

Pickering, January, 1867. W. S. SCHOLEFIELD, M.D.

MORMON PHYSIC.

WE know a good deal of the "perils of practice" in our own country; but the perfection of danger is to be found amongst the Mormons, who seem to believe in the efficacy of "the happy despatch." Some two years since, Dr. J. King Robinson was ordered to Salt Lake as surgeon of the United States troops, stationed there to watch and catch "rebels." He seems to have rapidly risen into favour with the Mormonites, and his medical skill was preferred to the cure by "laying on of hands," which is almost universally practised by the elders under Brigham Young. When the troops left, Dr. Robinson elected to remain, with his wife; he appears, however, to have objected altogether to Utah doctrines. He taught Gentile morality, and was a distributor of proper views by tract and other means. Having acquired land, he was about to build; but his brilliant career becoming offensive to the Mormon leaders, he was got rid of summarily. One night, hastily called out of bed, and going to attend a sick man, he was assassinated within 200 yards of his own door. This is "laying on of hands" with a vengeance.

Enquirer.—Port-Glasgow, notwithstanding the name, has nothing to do with Glasgow. It is a separate borough, twenty miles off, and under separate management altogether. There has been no trace of cholera in Glasgow since the beginning of December.

Dr. Langdon Down is thanked. A short notice shall be inserted if forwarded.

PREVENTION AND TREATMENT OF SCURVY.

Dr. Dowett Stone, in a letter to *The Times* of Tuesday last, makes the following valuable suggestions on the above subject:—

"First, that the emigration officers at the various ports in the United Kingdom be instructed to devote as much attention to the hygienic condition, comfort, and general welfare of the sailors as they do to emigrants; to see that adequate accommodation is provided for the crew; that the forecastles are sufficiently spacious—15 clear superficial feet per statute adult should, I think, be allowed,—well ventilated and properly lighted, and that the hawse pipes are fitted with mangers and scuppers to keep out the water; that the provisions and stores for the use of the crew are of the same quality as the like articles supplied to emigrants, and are furnished by the same firm or dealer, which latter regulation is adopted in her Majesty's emigration service; or if there be any objection to this, I would suggest that the seamen be allowed at any time to claim the rations equivalent to those served out in the Royal Navy, as is the case in the mercantile marine of France.

"Secondly, that licences be granted to vendors of lime-juice; that before selling it, 10 per cent. of spirit be mixed with it; that it be kept in half-gallon bottles, and not, as is often the case, in large casks; and in the event of a spurious article being sold, a heavy fine should be inflicted on the vendor.

"Thirdly, that competent medical men be appointed to examine the quality of the juice shipped, and to institute an investigation on any death from scurvy that may have happened during a voyage.

"There are other suggestions I think of hardly less importance that have been urged over and over again by Captain Toynbee—viz., a Government pension or annuity fund and life insurance managed by shipping masters.

"A check to be placed by Government on the decrease of British seamen by establishing training-ships for poor boys (especially sailors' sons), and, if it be found requisite, by encouraging shipowners to take apprentices. Were this carried out, there would be an end to useless landsmen, 'Jonahs of all sorts, without the prophet's virtues, betaking themselves to the sea,' as THE LANCET recently remarked.

"As regards the benefit fund for aged and decayed seamen, I think it most desirable that this should be founded at once, and I may, perhaps, be pardoned for urging what has been suggested by Captain Henry Toynbee—viz., that the Board of Trade give up to such society the unclaimed wages of deceased seamen now in their possession, amounting to, I believe, upwards of £80,000."

P. J. B.—The Coroner is not compelled to call for medical evidence if he thinks it unnecessary. It is, however, by far the better plan that a medical witness should be examined in every case.

Enquirer, (Somerset.)—If he were elected by the guardians, of course his appointment would be ratified by the Poor-law Board.

Mr. Kenneth Y. Osborne.—By application to the Secretary of the Peninsular and Oriental Steam-ship Company, Leadenhall-street, London.

F.R.C.S. wishes to know where he can procure a "Gilbert's Chair," cheap. He asks, "Who is the maker, and is the price reduced now that the patent is out?"

"A CRY FOR HELP."

THE following contributions have been further received on behalf of the above:—

Amount already acknowledged		£312	16 6
Per Dr. G. C. JENSON.			
J. H. Cole, Esq. (second donation)	£0	10	0
Dr. Topham, Roma	1	1	0
J. Propert, Esq. (second donation)	1	1	0

Mator.—Our correspondent had better take advice on the case. The condition of the head described is not a result of applications, but an abnormal state of the skin itself. Remedies cannot be prescribed on the strength of mere written descriptions of disease.

X. Y. Z.—It would not shorten the period of study, and would confer no advantage except that of the practice he might see at the hospital.

O. M. P.—There is no legal obligation to attend, but no humane man would refuse his services in a case of obstetrics requiring immediate attendance.

Dr. P. H. Watson (Edinburgh) shall receive a private note.

P. W. M.—We have no reason to suppose that the person alluded to is a member of the medical profession.

S. M. will find information on the subject in this week's LANCET.

Y. Y. Z.—If the agreement be drawn up in the usual form, it prohibits *practice* within the limits of the five miles. Such a covenant has no reference to the place of residence of the gentleman who agrees not to exercise his profession within a prescribed distance. Otherwise it is easy to understand how the terms of such a document might be evaded. In all actions at law for breach of such contracts, the judges have held that it is practice, and not residence, which is the question at issue.

M.R.C.S.E.—Dr. Copland's Dictionary, or Sir T. Watson's Practice of Physic.

MEDICAL OFFICERS AND BOARDS OF GUARDIANS.

To the Editor of THE LANCET.

SIR,—At the last meeting of the Board of Guardians, I charged them in the extra medical account with a fee of one guinea for a successful case of paracentesis abdominis, terming it tapping for dropsy, in order that each member might easily understand the nature of the case. At the same time I wrote a note, couched in civil terms, requesting them to allow me whatever fee they might think proper, and referring the Board to Art. 181:—"In any surgical case not provided for in Art. 177, which has presented peculiar difficulty, or required and received long attendance from the district medical officer, the guardians may make to the said medical officer such reasonable extra allowances as they may think fit and the Commissioners may approve." I am happy to say the guardians did not stint me in this case, and I obtained the guinea fee. You are at liberty to forward my name and address to any gentleman who may feel at all sceptical as to what I have stated.

May I ask whether there is any relationship between typhus fever, typhoid, and the cholera? I am inclined to think there is. Can the cholera be prolonged over several weeks with typhoid symptoms and appearance often ending like typhus? There is an epidemic in the town where I reside of the kind, which seems either infectious or contagious to those who reside in the same house where there is a patient so affected. Many cases occurred in the workhouse; but the complaint has ceased there since the inmates were cautioned not to drink the impure soft water.

I am, Sir, yours obediently,

January, 1867. S. W. S.

Medicus.—The question of who is to pay the medical referee, whether the patient intending to assure or the company, has been discussed over and over again. It is plain that the information given by the medical referee is for the *benefit* of the office, and is often given to the loss and annoyance of the medical attendant. However, one fact will prove the value to insurance offices of obtaining the support of the members of the medical profession. Those companies which acknowledge the claims of our brethren are amongst the most prosperous of these institutions.

THE case of *Dr. Helm* (Rugby) shall appear next week.

SPASM OF THE GLOTTIS.

To the Editor of THE LANCET.

SIR,—Perhaps some of your numerous correspondents would be good enough to inform me in what manner "spasm of the glottis" occasions sudden death. I am given to understand that the medical testimony at Coroners' inquests invariably consists of "spasm of the glottis," and death is accounted for as occurring instantaneously. I have referred to several standard works, vainly endeavouring to obtain the desired information. Asphyxia, laryngismus stridulus, laryngitis, diphtheria—to neither of these formidable affections is that awfully sudden death attributable, which deprives us of human existence without a struggle. Yours, &c.,

January, 1867. A STUDENT.

THE LEPROSY REPORT.

THE Report of the Royal College of Physicians on Leprosy is not yet published. It will be printed at the expense of the Government for the Colonial Office, and when it issues from the press, may be obtained from Messrs. Hansard and Co., Great Queen-street.

Medical Jurist.—Such appointment will probably be made; but an Act of Parliament is required to mature the project.

THE BOCKETT LAMP.

To the Editor of THE LANCET.

SIR,—In your report last week of the paper read by Mr. M. C. Cooke before the Quekett Club, is mentioned the "Rickett Lamp," instead of the "Bockett Microscope and Reading Lamp."

The above having been constructed to meet a great want of microscopists, I trust will be a sufficient excuse for begging the insertion of this, and oblige the manufacturer, Your obedient servant,

Great Titchfield-street, January 8th, 1867. CHAS. COLLINS.

ENGLISH PRACTITIONERS IN ITALY.

A Constant Reader wishes to know what restrictions (if any) are imposed upon English medical men practising in Italy, or if it is necessary to obtain the licence of any examining body.

SALTING IN LEADEN VESSELS.

To the Editor of THE LANCET.

SIR,—In parts of the country it is a practice to use leaden vessels for the purpose of salting bacon, &c. Now, as the salt acts on the lead, the meat must be more or less poisoned. I write this in the hope of calling attention to the subject, as great ignorance prevails amongst the public regarding the poisonous properties of lead. One person to whom I mentioned my objections to the use of lead for the above purposes, assured me that it was the *sweetest* thing that could be used. Yours obediently,

January 8th, 1867. W. L.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Y. Simpson; Dr. Alderson; Dr. Murchison; Mr. Callender; Dr. Fuller; Dr. Greenhalgh; Mr. Henry Lee; Dr. Cobbold; Mr. Baker Brown; Dr. P. H. Watson, Edinburgh; Dr. Ringer; Dr. Handfield Jones; Mr. Collins; Mr. W. Smith; Dr. Meadows; Dr. Stone; Dr. Robertson, Nottingham; Dr. Nihill, Tulla; Mr. Henry, Pomeray; Mr. Harding; Mr. R. Jones; Mr. Osborne, Glasgow; Mr. Sayer; Mr. G. S. Smith, Edinburgh; Mr. Gavel; Mr. Wills, Crewkerne; Dr. Oliver, Stockton; Mr. Baker; Mr. Nowell; Mr. Kilburn, Auckland; Mr. Wyatt; Mr. Cuteliffe; Mr. Bennett; Dr. Slack, Piddletown; Mr. Coales; Dr. Cooksey, Malvern; Mr. Henderson; Mr. Roberts; Mr. R. M. Williams; Dr. Munro, Bath; Mr. Biddle; Mr. Maccoll, Hebburn; Mr. Chapman; Mr. Fawthrop; Dr. Hewitson, Allenheads; Mr. Bowker; Dr. Shettle, Cann, Shaftesbury; Dr. Etches, Helperby; Dr. Helm, Rugby; Mr. Whatmough, Manchester; Mr. T. E. Williams, Talgarth; Mr. Macneill; Mr. Thurstan; Dr. Hadden, Tetford; Mr. Brewer; Dr. Wilson, Glasgow; Mr. Edgill; Dr. Davies, Denbigh; Mr. Hordley; Mr. Robinson; Mr. Baird, Linlithgow; Mr. Hurrell; Mr. Harvey; Dr. Caldwell, Irwine; Mr. Arnison, Newcastle; Mr. Evanson; Mr. Fowler; Mr. Newey; Dr. Fairbank, Brighton; Mr. Dunn; Dr. Warren, Geneva; Dr. Roberts, Blaenllicha; Dr. C. B. Fox; Mr. Leeds, Brenchley; Dr. Cruise; Dr. Eastwood, Gateshead; Dr. Ley, South Molton; Dr. Fullagar, Loughborough; Dr. Morris, Spalding; Dr. Madden, Bourton; Dr. Nicol, Llandudno; Mr. Sinclair; Mr. Gray, Rugeley; Dr. Down, Earlswood; Dr. Bruce; Mr. Myles; Mr. Piper; Mr. Hunter; Dr. Hamilton, Salford; Mr. Tallant, Illingham; Mr. Gowans, Glasgow; Mr. Baker, Birmingham; Mr. Killett; Mr. Gilling; Dr. Nason, Nuneaton; Dr. Allen, Longton; Dr. Elias; Mr. Grant; Dr. West, Alford; Dr. Trend, Southampton; Mr. Crafter; Dr. Thompson, Castlewellan; Mr. Hardy, Buckingham; Mr. Busby; Mr. Lampert; Mr. Buzzard; Mr. Teague; Mr. Thursfield; Mr. Jennings, Coleford; Dr. Roberts, Manchester; Dr. Price, Kingstown; W. L.; X. Y. Z.; Harveian Society; Royal Institution; A Student; Mater; A Member of the Council of the College of Surgeons; S. W. S.; Obstetricus; Medical Jurist; M.R.C.S.E.; Too Often Hoaxed; S. T. B.; W. A.; R. J. C.; Enquirer, Somerset; W. A.; Naval Medical Fund; O. M. P.; Medicus, S.; A Student of Medicine; S. M.; &c. &c.

THE *Brighton Guardian*, the *Army and Navy Gazette*, the *Suffolk Mercury*, the *Shipping Gazette*, the *Law Journal*, the *York Herald*, the *County Times*, *Northern Daily Gazette*, the *North Briton*, and *Lancetta Medica Epiziona* have been received.

Medical Diary of the Week.

Monday, Jan. 14.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 9 A.M. and 1½ P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8 P.M. Mr. Alfred Cooper, "On Fissure of the Rectum."
ROYAL GEOGRAPHICAL SOCIETY.—8½ P.M.

Tuesday, Jan. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. Chas. Kingsley, "On the Ancien Régime as it existed on the Continent before the French Revolution."
ANTHROPOLOGICAL SOCIETY OF LONDON.—8 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M.

Wednesday, Jan. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE. 8 P.M.

Thursday, Jan. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
LONDON SURGICAL HOME.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. Chas. Kingsley, "On the Ancien Régime as it existed on the Continent before the French Revolution."
HARVEIAN SOCIETY OF LONDON.—8 P.M. Mr. W. Adams, "On the Treatment of Hip-joint Disease."
LINNEAN SOCIETY.—8 P.M. Dr. Cobbold, "On Entozoa from the Swordfish," and "On Experiments with Trichina Spiralis."

Friday, Jan. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL INSTITUTION.—8 P.M. Prof. Tyndall, "On Sounding and Sensitive Flames."

Saturday, Jan. 19.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. Chas. Kingsley, "On the Ancien Régime as it existed on the Continent before the French Revolution."
METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—7½ P.M.